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STUDIES *in* ZOÖLOGY



Cincinnati
Zoological Gardens



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Studies in Zoology

A BOOK DEVOTED TO ANIMALS
AND ANIMAL LIFE AT THE



**Cincinnati
Zoological
Garden**

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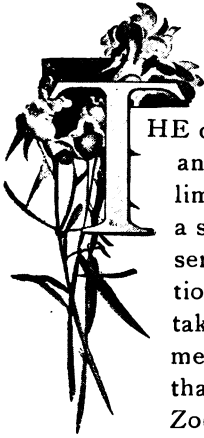
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CINCINNATI, OHIO
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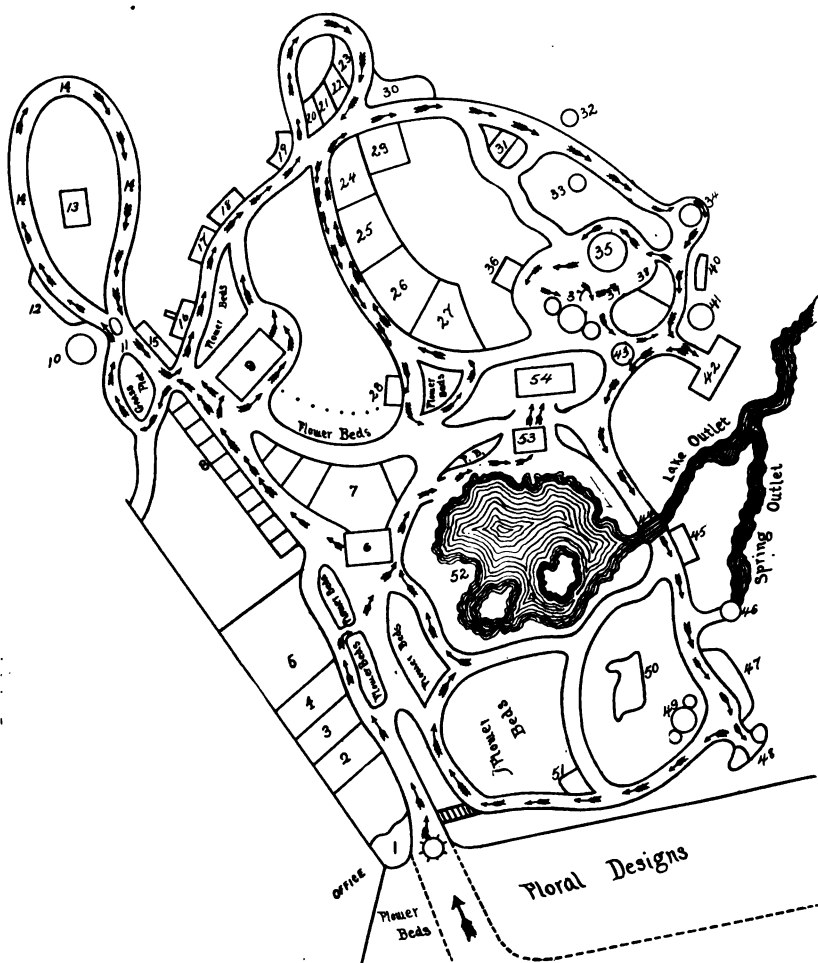
PREFACE.



THE object of this book is to enable the visitor to make an intelligent tour of our Zoological Gardens. Preliminary to a consideration of the various departments, a short history of the Gardens is given and a few observations on Zoology are presented. The description of the Gardens, as now constituted, then follows, taking up each house and enclosure separately. This method, it is believed, is less confusing to the visitor than an attempt to describe the specimens under a Zoological outline. The reason for this is that it is often necessary, for economic or other prudential reasons,

to place specimens in one department that naturally belong to another. Thus departments are constantly overlapping and do not conform to the departments of an outline of Zoology. But the student of Zoology will be in no danger of losing his way on this account. This Guide locates the specimens in the various buildings and enclosures, and in the pursuit of the systematic study of Zoology the student can go from department to department—Zoological text-book or field book in hand—and easily find that for which he seeks, classifying his observations as he goes.

Of course, in a book like this, it is not possible to be minutely descriptive, and so the author has aimed to tell as simply as possible what the attractions of the Gardens are and where they may be found, and gives a description, on a scientific basis, of the character and habits of many animals, birds and reptiles, with the hope that something may be found within the covers of the volume that will inspire more than one visitor to take up the careful study of Zoology—a branch of science one of the most useful because its study trains to habits of close observation and brings us “near to nature’s heart.”



LOCATION OF ALL BUILDINGS AND ANIMALS.

Arrows show Route to be taken. Cincinnati Zoological Garden.

- | | | |
|-----------------------------|----------------------------------|----------------------------------|
| 1 Main Entrance | 21 Ostrich Inclosure | 39 Mink |
| 2 Llama | 22 Emu Inclosure | 40 First Cage of the Zoo |
| 3 Black Fallow Deer | 23 Hog Deer Inclosure | 41 Alligator Basin |
| 4 Siberian Camel | 24 Spotted Axis Deer Inclosure | 42 Winter Quarters and Pavillion |
| 5 Elk | 25 Camel Yard | 43 Coon Tree |
| 6 Monkey House | 26 Zebra Yard | 44 Carp Pond and Water Fall |
| 7 Pheasant Yard | 27 Mountain Goats and Sheep | 45 Zebu Yard |
| 8 Avaries | 28 Snake Cage | 46 Spring |
| 9 Carnivora Building | 29 White Fallow Deer | 47 Virginia Deer |
| 10 Caronsel | 30 Red Deer | 48 Small Animal House |
| 11 Squirrel House | 31 Bear Pits | 49 Eagle and Vulture House |
| 12 Amphitheatre | 32 Small Fox House | 50 Proposed Elephant House |
| 13 Elephant and Camel Stand | 33 Small Skunk House | 51 Owl Cage |
| 14 Pony Race Track | 34 Badger Cage | 52 Lake |
| 15 Green House | 35 Sea Lion Basin | 53 Band Stand |
| 16 Generating Station | 36 Water Buffalo | 54 Restaurant |
| 17 Yak Inclosure | 37 Proposed Lilly and Fish Ponds | |
| 18 Buffalo Inclosure | 38 Prairie Dogs | |
| 19 Wolf Dens | | |
| 20 Kangaroo | | |



Photo by Eano Meyer.

MAIN ENTRANCE

HISTORY

OF THE ZOO—

ANDREW ERKENBRECHER will always be known as the founder of the Cincinnati Zoological Gardens. From early youth Mr. Erkenbrecher was a lover of birds and animals, and manifested this affection for our furred and feathered friends by keeping a great many bird and animal pets on his farm. A large cage is still exhibited at the Gardens which Mr. Erkenbrecher formerly used on his farm in which to keep his birds, and it is still utilized for this purpose. Mr. Erkenbrecher for years previous to the establishment of the Zoo had such an institution in mind, having often spoken of it to Mr. Florence Marmett, Albert Fischer and many others of his business and social associates. Prior to the organization of the Zoological Society, the Society of Acclamation was in existence. It was at a meeting of this in June, 1873, that the question of Zoological Gardens for Cincinnati was first formally discussed. A letter from Dr. Brehm, the world famous zoologist, gave rise to the discussion which became enthusiastic, and it was resolved to call a meeting for June 30, in the Board of Trade rooms, to which all persons favoring the establishment of a Zoo were invited.

At this meeting arrangements were made for the organization of a stock company, and in less than a month afterward a large amount of stock was subscribed and a Board of Directors elected. At first it was thought that Burnet Woods Park would be the proper place for the Zoo, and an effort was made to get the city authorities to grant this Park for such purpose, but without success.

The present site was afterwards purchased. The original tract of land embraced 67 acres. It cost a great deal of money to grade it, enhance its natural beauty and erect the necessary buildings, but the founders were men of means and spirit, and every obstacle was overcome.

The Gardens were formally opened to the public Sept. 18, 1875. But the receipts did not equal the expenses, which were great, involving as they did not alone the preparation of the grounds, the erection of buildings, and the purchase of birds and animals, at the start; but also the maintenance and constant enlargement of the collection, and constant improvements of grounds and buildings. And so it was that a large debt began to accumulate. This was liquidated by selling off part of the land, not used, for a subdivision.

With renewed hope the Gardens were then greatly improved. The animal and bird displays were added to from time to time until the collection in point of variety was equal to any in the world. Then, the general financial distress fell on the country, hard times and dark days came again to the Garden (Zoo) and in 1897 it was found that the debts had accumulated beyond any possibility of their being paid by the Garden, and, after careful consideration, it was decided to place the company in a Receiver's hands. This was done January 22, 1898. The Court named as Receiver Hon. Albert Fisher, who has always been a staunch friend and supporter of the Garden since its inception, and Hon. Gustav Tafel. Later Mr. George Hafer was appointed co-receiver when Mr. Tafel became Mayor of the City. These gentlemen undertook the difficult affair with only one object in view, namely, to "save the Zoo."

Fortunately they, and others greatly desiring to preserve the Zoo to the City of Cincinnati, were able to interest a large number of the most public spirited citizens of

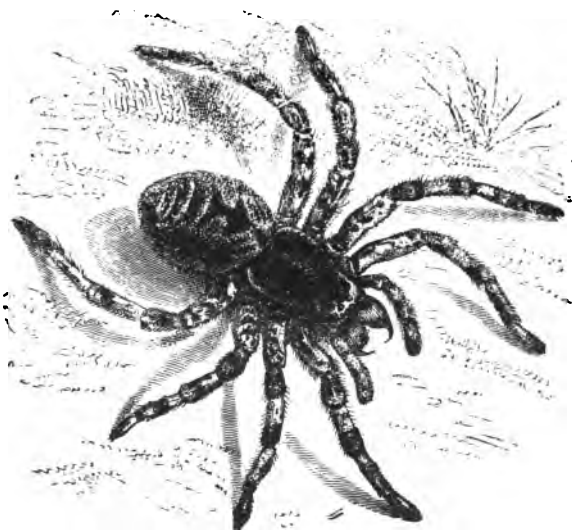
the City, and the large amount of money necessary to satisfy the debts (many debtors and old stockholders proving to be the most lenient) and take the Garden out of the Receivers' hands was generously subscribed by these men who were not looking to their financial advantage but to the main object of preserving the Zoological Garden, making it one of the City's chief attractions, and a pride to all Cincinnatians.

Thus the money was raised, the present company, 'composed of many of Cincinnati's most public spirited and wealthiest citizens, was organized, and the "Zoo was saved."

A study of the Garden for the past few months will show with what energy the work has been undertaken.

Mr. Hagenback of Hambourg (a high authority), who visited the Garden recently said that within fifteen months he had visited all the principal Zoological Gardens in the world and that as to the condition of the collection, buildings, grounds, the care displayed and success achieved with the animals and birds, the Cincinnati Zoological Garden was second to none, without exception, and in many respects was superior to any other.

The management confidently rely upon the co-operation and support of all the citizens of Cincinnati and with their help believe that the Garden will continually grow more beautiful, enjoyable and instructive. will rank among the great Zoological Gardens of the World, and be a continual source of pride to the City of Cincinnati.



ZOOLOGY

The present state of Zoological Science gives the original divisions of which the Animal Kingdom is composed, they are as follows:

VERTEBRATES The highest and most important branch of the Animal Kingdom, embracing all animals that have a backbone.

MOLLUSCA—Are animals which have soft bodies enclosed in a muscular skin, the majority being protected by a shell, as the Oyster, Mussels, Cuttle Fishes, Snails and Slugs.

ARTICULATES—Are jointed animals, comprising Crabs, Lobsters, Worms and Insects.

COELENTERATA—Jelly-fishes and other marine animals belong to this division.

ECHINODERMATA—So named on account of the star shaped body. Star Fishes and Sea Anemones are examples of this class.

The term Zoology, includes the whole of the Animal Kingdom, besides which different departments have received particular names as Ornithology, for birds; Ichthyology, for fishes; Entomology for insects; and Conchology for the soft-bodied animals.

The Vertebrates include all animals which have a bony or cartilaginous axis, called Spinal Column. Our Zoological collection is only represented by the first division namely the Vertebrates—which comprises five great classes as follows:

- 1st. Mammalia, all those animals which suckle their young by means of breasts,
- 2nd. Aves, or birds.
- 3rd. Reptilia, comprising animals that creep, as serpents, lizards and turtles.
- 4th. Batrachia, animals which are destitute of scales, as frogs, toads, salamanders and newts.
- 5th. Pisces, or fishes.

GENERAL DESCRIPTION

LOCATION The Cincinnati Zoological Gardens are situated about three miles from Fountain Square in the most picturesque portion of the circlet of hills that, like "Rome's Seven" crowns the city. They are beyond Mt. Auburn with Avondale and Walnut Hills to the east and Clifton to the west.

EXTENT The Zoological Gardens embrace 45 acres, beautifully diversified by hill and dale and undulating plain and valley. The landscape gardening is a special feature, the most talented artists being employed to enhance the beauties of nature. Pretty rustic bridges span the picturesque ravines and clean, broad gravel walks traverse the grounds in all directions, leading conveniently to the various animal buildings and enclosures and the aviaries.

THE BUILDINGS The buildings are mostly of stone and iron, and are of a style of architecture substantial yet graceful and pleasing to the eye. The magnificent Club House with its broad and home-like verandas, the mammoth Carnivora building, the circular Monkey House, the Eagle House, the avenue of Aviaries, the Pavilion and Elephant, Sea Lion Rocky Basin and Ostrich winter quarters, the Music Pavilion, are among the most notable of the buildings. These, together with the lesser structure on the grounds, were erected at an expense of tens of thousands of dollars.

THE ENCLOSURES Among the most notable enclosures are the Deer Parks, the Yak Yards, the Buffalo Paddocks, the Bear Pits, the Wolf Dens, the Camel Yards, the Prairie Dog Village, the Sea Lion Basin, Badger Cage, Alligator Basin, the Lake and the Pheasant and Fowl yards. These take up a number of acres and are easily accessible to visitors.

HOW TO TOUR THE GROUNDS In many cases the visitor's stay at the Zoo is limited, and he has not time to linger at the various places of interest as his inclination would have him to do. In order to get a casual view of the attractions in a limited stay in the grounds, he should follow this book. This will lead him to all the buildings and enclosures with but little retracing of footsteps.



Photo by Enno Meyer.

ELK

THE LLAMA PARK

Immediately after passing through the turnstiles, the visitor's attention is directed to the Llama Park on the left, in which may be seen two fine specimens of the llama (Llama Peruana). The term llama was formerly used to designate a group of animals in South America closely allied, and including two domesticated varieties and two wild varieties. The specimens at the Zoo belong to one of the domestic varieties, and what



Photo by Enno Meyer

LLAMA

the horse, the ox, the goat and the sheep is to the Old World, this species of llama, with its kindred domestic species, was to the southern continent and the New World. They are variable in size and color, sometimes white, sometimes black, sometimes brown color. They are about four feet in height. They attain their full size at the age of three years, and remain strong and vigorous until fifteen years, after which they begin to decline.



Photo by Enno Meyer

BLACK FALLOW, DEER

FALLOW DEER

(DAMA VULGARIS)

This deer comes from Europe. They are found but rarely wild in the forests, and are bred up in parks. The color of this animal is a deep blackish brown. The buck has palmated horns which he sheds every year. The young are born about June. The fallow deer lives to the age of eighteen to twenty years.



Photo by Enno Meyer.

DOUBLE HUMP CAMELS

THE BACTRIAN OR TWO HUMPED CAMEL

(CAMELUS BACTRIANUS)

This camel can be distinguished from the ordinary camel by its double hump and long, shaggy hair. It is also a larger and more powerful animal than the Arabian camel. It is intended to travel in the cold country in the north of Asia. All camels are furnished with thick callous pads on the chest and joints of the legs to guard them from injuring the skin when they kneel down to be loaded or relieved of their burden.

ELK YARDS

Adjoining the Llama Park is the Elk Yard, which covers about an acre of ground, and contains five fine specimens, two males and three females, of the American Elk or Wapiti (*Cervus Canadensis*). The deer family is one of the most extensive in the Animal Kingdom; it comprises eight general and fifty-two species, and as the visitor continues his tour over the grounds, he will find representatives of other species. The American elk represented in this enclosure corresponds to the stag, which is hunted by the royalty of Europe, though it is larger, being about a foot taller and has heavier antlers. It is the largest deer in the world except the Moose, which formerly ranged over the north of Europe and Asia, and North America from the New England States westward to British Columbia, but has now become very scarce. American Elk is found generally in Canada and the Rocky Mountains. Its food is grass, willow and popular shoots, but it thrives nevertheless. For some reason it has acquired a reputation for unusual stupidity. Its flesh is coarse and not highly appreciated because the fat is so hard. The members of our herd of Elk are very tame, in fact, they are usually harmless except during the breeding season, when the bucks engage in some terrific duels, using their antlers and feet as weapons, the (*causes belli*) being their rivalry for the possession of a doe. Like all the deer family, the American Elk sheds its antlers every year in the spring. The visitor will observe that the inmates of this enclosure are large and imposing, one of the large bucks in this herd weighing about 700 pounds.

THE MONKEY HOUSE

Directly opposite the Elk Enclosure is the Monkey House. This is a large, round building, which is built of stone, iron and glass. It is 60 feet in diameter, and the distance from the floor to the large glass dome in the center of the roof is 40 feet. The interior is divided into 18 cages, and there are three large cages on the outside of the building for the use of the monkeys in pleasant weather. This is one of the handsomest buildings on the grounds, and was erected at a cost of \$14,000.00.

Most general of the Monkey tribe are usually represented in this building, but there are hundreds of species and it is impossible to have them all represented. Many species are hard to keep in captivity, and deaths are frequent. Those which die are replaced by purchase of others as soon as possible. So the visitor will usually find a large and varied collection of Monkeys in this building. Following is a list of the monkeys now here:

- Mona Monkey, (*Cercopithecus mona*)
- Green Monkey, (*Cercopithecus callitrichus*)
- Campbell's Monkey, (*Cercopithecus campbelli*)
- Pig-tailed Monkey, (*Macacus nemestrinus*)
- Macaque Monkey, (*Macacus cynomologus*)
- Vervet Monkey, (*Cercopithecus lalandii*)
- Black Spider Monkey, (*Ateles ater*)
- White-throated Capuchin, (*Cebus hypoleucus*)
- Arabian Baboon, (*Cynocephalus hamadryas*)
- Sooty Mangabey, (*Cercoebus fuliginosus*)
- Mandrill, (*Cynocephalus mormon*)
- Drill, (*C. leucophaeus*)

The animals of the Monkey Tribe stand at the head of the division *Mammalia*.



THE CHIMPANZEE, (*Troglodytes niger*)

The most intelligent of these apes is the Chimpanzee, which is found in West Africa in the region extending from the Gambia to the Benguela. They have no tail, no cheek pouches, attain a height of five feet, have a low forehead, large ears. Their hair is long and black, their legs and feet brown, and their face and nose of a dirty flesh color. When on the ground they walk on the knuckles of their hands, like other long armed apes, thus converting their arms into a pair of crutches. They are tree dwellers and live on fruit, and, probably, small birds and animals. In captivity they are lively and playful, and on terms of affectionate intimacy with their keepers. Chimpanzees have been great attractions in all Zoological Gardens possessing them, but it has been exceedingly difficult to keep them in captivity. They are peculiarly sus-

ROONEY II

ceptible to consumption. "Mr. and Mrs. Rooney" — a pair of Chimpanzees which were formerly a great attraction at our Gardens, are now dead, both having succumbed to the ravages of tuberculosis. After 4 years of correspondence we have just secured a very fine young Chimpanzee that has been christened Rooney II. He is now being educated and promises to out shine the original Rooney being quick at learning.

THE GORILLA, (*Troglodytes gorilla*)

This is the largest and fiercest of the man-like apes, and wonderful stories are told of its ferocity. Gorillas live in families in Western Equatorial Africa. Their average height is five feet six inches, their legs are short, their arms are disproportionately long; their hair is not so long as the Chimpanzee. They live on the ground more than the Chimpanzee, though at night they sleep in the trees in rudely constructed couches. They avoid encounter, but, when attacked, are dangerous. Koppenfeld says that when scared by man the Gorilla "sends forth a howl or furious yelp, stands up like an enraged bear, and advances with clumsy gait in this position to attack his enemy. The hair on his head and the nape of his neck stands erect, his teeth are displayed, and his eyes flash with savage fury. He parries blows direct against him with the skill of a practiced fighter."

Owing to the great strength and ferocity of the gorilla, it is said that the natives of the Gaboon believe it to be inspired with the spirit of one of their kings.

ORANG-OUTANG, (*Simia satyrus*)

The Orang-outang is found exclusively in Borneo and Sumatra, in the swampy coast forests. It usually attains a height of four feet four inches. Its legs are very short and its arms are exceedingly long. It is extremely hideous in appearance, owing to the projections on its jaws and the callosities on its cheeks. It is of a chestnut color, darkening here



and there into brown, and the hair of the face is lighter than that of the body. It lives principally on fruit.

THE GIBBONS, (*Hylobates*)

These are species of long-armed apes found in South-eastern Asia and the Indian Archipelago. There are a number of species. They feed on vegetation. They are remarkable for the lengths of their arms, which are so long that they reach the ground when standing erect. They have no tail, and no cheek pouches.

We now come to the Second Division of the Old World Monkeys—

(THE SEMNOPITHECINAE.)

These are a class of monkeys possessed of very long tails, and are found in both Asia and Africa. One of the most interesting is the

HOUNAMAN MONKEY (*Semnopithecus entellus*),

which the Hindoos hold in *religious* veneration. This monkey is sagacious enough to take advantage of this fact, and ensconces himself in great numbers in the villages of India placidly appropriating food, and doing other things that interfere with the domestic affairs of their worshippers, knowing full well that they will not be disturbed. The

SOOTY MANGABEY (*Colobus Fulingniousus*)

also belongs to this division. Its name indicates its color and it has white eye-lids. It is lively and active, though gentle and well-behaved.

THE PROBOSCIS MONKEY (*Semnopithecus nasalis*)

so called because of its long nose, and many other varieties are included in this class. The remaining genera of the Old World Monkeys are included in a sub-family *Cynopithecinae*. These monkeys are well represented in our collection. One of the most notable is

THE MONA MONKEY (*Cercopithecus mona*).

This is a native of West Africa. It is one of the most cunning and active monkeys known, and when tamed and permitted to run at large around the house, does many mischievous tricks. It can untie knots and search pockets with a delicacy of touch equalled only by the most adroit thief. It is always gentle and playful, and likes to be caressed.

THE VERVET (*Cercopithecus lalanlii*)

is a native of South Africa and feeds on the gum of the acacisa. Its fur is greyish-green and it has black hands, feet and face. These monkeys are often seen in confinement.

THE GREEN MONKEY (*Cercopithecus callitrichus*)

is famed from Senegal to the Niger and its color is dark green. It is apparently voiceless. At least it utters no sound in confinement.

THE PIG-TAILED MONKEY (*Macacus nemestrinus*),

is found in the Malay Peninsula and in Sumatra, Borneo and Java. It is said that in Sumatra the natives train the monkeys to climb cocoanut trees and gather the fruit. This is only one of numerous varieties of the Macacus Monkey, which has a head bearing some resemblance to that of the Baboon. They are easily domesticated, and are always represented in our collection.

THE ARABIAN BABOON. (*Cynocephalus hamadryas*.)

This animal generally measures about four feet in height when standing straight, and two feet when in a sitting posture. A long, shaggy mane covers the head, neck

and front of the body; while on the hips, thighs and legs the hair has the appearance of being clipped. This animal is not susceptible to kindness and cannot be tamed. They are more common in Abyssinia and Soudan than Arabia.

THE GUINEA BABOON, (*Cynocephalus sphinx*)

This frequently has a representative at the Gardens. It is somewhat like the Mandrill. The color is yellowish brown, shaded with sandy tints. The eye lids are white, the hairless parts black, and the tail about half the length of the body.

MANDRILL, (*Cynocephalus mormon*.)

This animal is remarkable for its variety of color. Its cheeks are deeply furrowed and are of a deep blue color, a narrow, blood-colored ridge extends down the middle of the face and terminates in the nose. When standing upright the Mandrill is in height from three to four feet. When full grown it is an exceedingly fierce animal. This Baboon is a native of West Africa.

THE CEBIDAE--or the New World Monkeys--

Are generally well represented in our collection. One of the most interesting of these animals is

THE BLACK SPIDER MONKEY, (*Ateles ater*.)

This belongs to the genus *Ateles*—this name being given to them because of their long and slender limbs, and their long tail—so powerful that its grasp can sustain indefinitely the weight of the entire body. The tail serves as a fifth hand, enabling it to secure objects otherwise out of reach. It is extremely sensitive to cold, and when chilly is in the habit of wrapping its tail around its body. It does not live long in captivity. It is an inhabitant of Central America.

THE CAPUCHIN MONKEYS

Among those in the collection are the White-throated, (*Cebus hypoleucus*); the Brown Capuchin, (*Cebus fatuellus*), and the Weeper Capuchin, (*Cebus capucinus*). These monkeys are so called because their heads, covered with hair, resemble a monk's cowl. This is the kind of monkey usually found with the omnipresent and persistent organ grinder. The *Weeper Capuchin* is so called because its eyes are continually suffused with tears.

THE PINCHE MONKEY, (*Midas oedipus*)--from Brazil.

This little creature is called the Lion Monkey because its face is framed in a mass of hair giving it the resemblance to a lion.

THE MARMOSETS, (*Hapalinae*.)

These animals are very small, the largest being about the size of a squirrel. Like the latter lively animals, its motions are quick. They live in trees and eat fruit. They are very hard to keep in captivity, but we usually have a few in our collection. There are several different species.

LEMURS.

These animals resemble monkeys in some respects, but they are not really monkeys, neither can they be classed among the true quadrupeds. They have sharp, foxy looking heads, large staring eyes, and nostrils at the extremity of the snout like those of the cat. The tail is never prehensile. Their habits are nocturnal, the name "Lemur" signifying "a night-wandering ghost." They are all natives of Madagascar. Among the Lemurs in our collection are the

BLACK-HEADED LEMUR, (*Lemur brunneus*), and

THE RUFFLED LEMUR, (*Lemur varis*.)

Besides the Monkeys and the Lemurs there are frequently other animals in the Monkey House. One of them just now is

THE BROWN COATI, (*Nasua nasica*)

This animal belongs to the roccoon family. Its total length, including tail is about three feet. These animals seem to rather enjoy captivity. They are natives of South America.

THE KINKAJOU, (*Cercoptes condivulus*.)

This is a small animal of nocturnal habits. It does all its food hunting at night. It is somewhat like a Lemur in appearance. Its color is yellowish brown. It lives in the trees and has a prehensile tail.

THE RACCOON, (*Procyon lotor*.)

There are generally several specimens of this little North American animal in the cages, both inside and outside the Monkey House. They are found in forest near running water. They are from 30 to 36 inches in length, including the tail, which is about 12 inches in length. Their fur is greyish brown, and the tail is tinged with black. One of their peculiar habits is that of dipping their food in water before eating it.

THE INDIAN FRUIT BAT

(*PTEROPUS MEDIUS*.)

There are in all one hundred and thirty species of Bats, and they are distributed over every quarter of the globe. The Indian Fruit Bat is the largest of the family and,



FLYING FOX WITH YOUNG

with wings extended, measures nearly four feet. Its popular name is Flying Fox—the red fox-like color of its fur and the vulpine appearance of its head gives it this name. It is a native of India, where it does great damage to gardens and plantations, and is also found in the Philippine Islands, where the natives have been known to eat them when pressed for food. The Fruit bats in our collection breed and carry their young suspended head down. Bananas, figs and other soft fruits are their food in captivity. This animal is frequently exhibited under the name of Vampire, but the body of the Vampire is only six inches long, and its fur is mouse-colored.

ESQUIMAUX PUPPIES

(THE LITTLE DOGS)

(Indian Names—Skukum Mina Kiyemisio—in English means Swift and Cunning), were born at *The Cascades*, at the mouth of the *Athubasca River*, near *Fondulac*, *Greet Slave Lake*, North-west Territory, Canada, August 28th. The father was an

Esquimaux sleigh dog. The mother one-half Esquimaux and one-half Arctic Fox. When full grown will be as large as a New Foundland dog. The Indians in the far north catch the Arctic Fox, tame them and breed them with the Esquimaux or Husky dogs to give them speed. The cross being one-half Husky and Wolf, one-half Fox. A team of four dogs will pull a sleigh with 250 pounds and the weight of driver, 50 and 60 miles a day, easily. They have been known to travel 80, 90 and sometimes 100 miles over the lakes. Their food is chiefly *fish*. One fish per day being their allowance. They are also kind and even affectionate, and very easy to train. The Indians also use them to pack. You will often see a band of Indians on the trail to the hunting grounds and every dog is carrying from 50 to 60 pounds. They are also trained to hunt Moose, Muskox and Bear. They are learned to bring them to bay and keep them there until the Indians catch up, and kill them. These dogs take the place of horses in the north and are valuable to the Indian and trader. A team of four dogs often will sell for \$150.00 to \$200.00. They sleep on the snow and ice without any shelter or care.

PHEASANT AND FOWL ENCLOSURE

Leaving the Monkey House by the west door, the visitor will next direct his attention to the Pheasant and Fowl Enclosure, which embraces about one-half acre of ground, enclosed by a high fence of wire netting, with a pond or miniature lake near the center, in which are confined a variety of Pheasants, and Fowls, including Mandarin Ducks, White Call Ducks, Brown Call Ducks, Ruddy Sheldrakes, Wood Ducks, Mallard Ducks; White Storks, Egrets, the Ibis, Gold Pheasants, Ring-neck Pheasants, Green-winged Teal Ducks, etc.

These, with hundreds of other specimens in the aviaries and other departments, constitute a splendid representation.

The birds in this enclosure are deeply interesting, and many of them are very beautiful. Three orders of birds are represented in the Enclosure. The Egrets and Ibis represent the Order *Herodines*; the Ducks, Teals, Sheldrakes, represent the Order *Anseres*; and the Pheasants represent the Order *Gallinae*.

THE PHEASANTS (Phasianus.)

These beautiful birds embrace a number of varieties. Their original home is Asia Minor, China.

GOLDEN PHEASANTS (Pictus).

This is one of the hardiest of this species. It has a large ruff of feathers, which fold around its neck, and its crest is finely developed and of a rich golden yellow with a tinge of carmine, the breast is a bright scarlet, and the tail is rich chestnut mottled with black. Its eye is bright. This description applies, however, only to the male bird. The female is reddish-brown, and has a short tail; its colors are subdued, the male apparently having appropriated the gorgeous plumage to himself.

THE SILVER PHEASANT (P. nycthemerus.)

This has a purple-black crest, and the skin around its eyes is bright scarlet, the upper surface of the body is silver-white and delicately penciled with black, wavy lines, the tail is white, boldly penciled with black. The female is a smaller bird, has a smaller crest and a short tail, and its color is brown, the breast being greyish-white.

THE RING-NECKED PHEASANT (P. torquatus.)

Hails from China, and has a broad, white collar from which it derives its name. It is also called the Green Pheasant because of the beautiful tinge of that color that in certain lights shows in its beautiful plumage.



Photo by Enno Meyer.

MONKEY HOUSE

THE PEACOCKS (*Pavo cristatus*).

This beautiful bird belongs to the pheasant family. Frequently there are specimens in this enclosure, though they are permitted to roam at large over the entire enclosure. This bird is a native of Asia, and is easily domesticated. It is now raised only for ornamental purposes.

BLACK SWAN (*Cygnus atratus*.)

This species comes from Australia. The Black Swan is similar in its form to the White Swan, but is somewhat smaller in size, every part of its plumage is perfectly black, with the exception of the white primaries feathers, its bill is of a bright red above and crossed at the anterior part by a whitish band, the legs and feet are of a dull ash color. When flying the Swans fly off in a direct line one after the other, like wild geese.

THE RUDDY SHELDRAKE (*Casarca rutila*.)

This is a bird somewhat like a goose in appearance. It has a brilliant plumage and derives its nickname "Sly Goose" from its habit of feigning lameness in order to decoy intruders from the vicinity of its nest. After getting them a safe distance away it spreads its wings and flies far away.

THE WHITE CALL DUCK, (*Anas domestica*)

the Brown Call Duck, the Wood Duck, (*Axis sponsa*), the Mandarin Duck, (*Axis galariculata*), and other specimens of the duck family are usually found in this enclosure.

STORKS.

This is a bird whose history is very ancient. It has been celebrated in song and story for many decades. Its natural home is in Africa; while it is an annual visitor of Europe, it migrates there every year from its winter quarters in Africa.

There are two varieties in this enclosure.

THE WHITE STORK, (*Ciconia alba*)

Which, with head erect, is nearly four feet in height, and

THE BLACK STORK, (*Ciconia nigra*)

Which is more rare. It feeds on fishes and nests in high trees. It attains a great age, one being for thirty years in the Zoological Gardens in Regent's Park.

THE WHITE EGRET (*Herodias egretta*)

Is found in the southern portions of America. It frequents the marshy lowlands, and feeds on frogs, fish, snails and small animals. It is a handsome bird, and quite conspicuous because of its large size and snowy plumage. It has a sharp bill six inches in length.

DUCKS.

Several varieties are always in this enclosure. One of the most notable is the

MALLARD DUCK, (*Anas boschas*)

This familiar duck is the original from which most all the varieties of our domestic ducks have sprung. This bird is common throughout the whole of North America. As wild fowls are mostly all migratory they go north in summer and south in winter. The favorite breeding places for the wild ducks are the wild rice fields of the numerous intricate windings of the lakes of Minnesota and the north-west territory, where they are found in June and July in vast numbers, and are perfectly safe from intruders. In December, January and February they will be found by the thousands on the large bayous and small lakes that surround the mouth of the Mississippi.

THE WOOD DUCK OR SUMMER DUCK, (*Axis sponsa*.)

This is one of the most beautiful of our American ducks. This bird seldom associates in flocks of more than eight or ten. They live mostly on grain, several aquatic plants, beech-mast and snails. It does not appear, however, to be one of those which invariably migrate northerly in summer. Towards March the flock separates and they pair off. Its nest is frequently made in old hollow trees overhanging the water. When the young are all hatched, the female carries them one by one in her bill by the wing to the water.

THE PINTAIL DUCK, (*Defila acuta*.)

This duck derives its name on account of its long pointed tail feathers, is a winter visitor of moderate climates, arriving in October and departing in the spring. The male is most elegantly marked. Its head and neck is a rich dark brown, its back is beautifully penciled with black on a gray ground, the throat, breast and abdomen is snowy white; a line of the same color runs up the sides of the neck to the head. The length of this bird is about twenty-five inches. The pintail duck is frequently seen in company with mallards, teal and widgeons on creeks and ponds.

THE MANDARIN DUCK, (*Axis galericulata*.)

This is the most beautiful bird in appearance of all the ducks. It is a native of China and Japan. They are as much admired in China for the beauty of its plumage as it is in Europe. In the markets at Canton they may be seen for sale in cages and are sold at from \$6 to \$10 per pair. In the month of June the male bird loses his fine crest and brilliant colors. In the next three months he assumes a brown mottled color, resembling very much his mate. Like the wood duck this bird nests in hollow trees.

BLUE-WINGED TEAL, (*Querquedula discors*.)

This is one of the smallest American fresh water ducks. During the migrations it is abundant in the Missouri region. Some hunters claim it breeds there. This duck is the first to return to us in the fall from the north. It flies rapidly, and when it alights it drops down suddenly like the woodcock. The male's plumage on the head and under tail covers is a brownish black, with a very conspicuous broad, white crescent-shaped spot from the forehead to the chin, bordered all round with black; the whole of

the shoulder and lesser wing covers are a pure white or sky blue; the breast is reddish brown and thickly marked throughout with round blackish spots. The male measures fourteen inches in length. The female is unlike the male—the upper plumage is brown, the under plumage is white and brown with irregular blotches of a darker color instead of neat, round spots.

CROWNED CRANE, (*Balearica pavonina*)

This bird is a native of Northwestern Africa, where it is found in low marshes. Its food consists of frogs, lizards, snakes, snails and grass. In captivity it feeds on corn, wheat bread and greens. Its forehead is covered with a thick tuft of short velvety feathers of a soft brilliant black. Its handsome crest is of a golden hue. The naked cheeks and temples are of a delicate rose color; the wattle on its throat is a bright scarlet. With the exception



CROWNED CRANE

of the tail and wing feathers the body is a dull bluish color. In height it stands about three and a half feet.

STANLEY CRANE, (*Tetrapteryx paradisea*)

Is another beautiful South African Crane. The color of the plumage is slaty-gray, the height of this species is about four feet. This bird becomes very tame when kept in captivity.

DEMOISELLE CRANE, (*Scops virgo*)

This is a handsome little crane from Africa, two and a half feet in height. This bird is also called Secretary Crane. It derives its name from the white feathers which extend back of the eyes, with the exception of the head, neck and breast which is a deep black gray; the general tint of the plumage is blue gray. In captivity it is a very playful bird, jumping about, flapping its wings and bowing its head in a graceful manner.

THE WOOD IBIS, (*Tantalus loculator*)

This name is given to a curious group of birds of which there are several species: The most famous, from a historical standpoint is the Sacred Ibis, which is a native of Africa. It is about the size of a common fowl, and the ancient Egyptians held this bird sacred. We have two specimens in our collection. The Wood Ibis from Florida, and the Scarlet Ibis (*Ibis rubra*) a native of South America. Its color is a bright scarlet.

THE PRONG-HORNED ANTELOPE, (*Antilocapra Americana*)

This Antelope a few years ago was quite common on the western plains and low hills at the foot of the Rocky Mountains. When full grown its height is about three feet, its coat is a yellowish brown on the back, white below and inside of its limbs; also the crescent on its throat is white. The buck's horns are jetty black and pronged at the point where they curve back-wards. It sheds the outer shell of its horns annually. The female has no horns. When young they are easily tamed, but are short lived in captivity.



Photo by
Master C. Hanke

ANTELOPE

THE AVIARIES

Leaving the Pheasant and Fowl enclosure the visitor will incline his footsteps to the Aviaries opposite. These were erected at an expense of \$15,000.00. and consists of seven pretty, tasteful, stone buildings. They are connected by summer cages of wire netting. The buildings are each eighteen by twenty feet and the summer cages are about the same size—some of them larger. Here are housed one of the finest, largest and most valuable collection of birds in the world, including rare and beautiful birds of the tropics, which require for their preservation the most constant and intelligent care. Some of the specimens have no living duplicate in captivity and are, therefore, prized the more highly. It is not possible in the limits of this Guide to enumerate and describe all the birds in this department. Attention is called, however, to the

more novel and attractive specimens. The visitor will find a large number and variety of small birds belonging to the

ORDER PASSERES

The birds of this order have four toes on nearly the same level and the hind toe directly opposite, thus giving great facility for perching. Among the specimens of this order usually found in our collection are English and American robins, thrushes, cat-birds, blue birds, chewinks, yellow-hammers, finches, nutmeg birds, waxbills, African silverbills, weaver birds, Java sparrows, indigo birds, nonpareils, canary birds, gross-beaks, cardinals, orioles, cow-birds, troupials, starlings, larks, sparrows, blackbirds, magpies, crows, etc.

THE FINCH FAMILY

Is a very large one, including in it the Bunting, the Larks, the Tanagers, and the Weaver Birds. Canary Birds are also included in this family. They have a hard bill adapted for shelling and eating seeds. They build nests remarkable for their artistic beauty.

THE JAVA SPARROW

Is a large finch found in Java and is quite popular as a cage bird.

INDIGO FINCH, (*Cyanospiza cyanea*.)

This bird has a changeable color and is very pretty. In the summer months the color of the male is a bright indigo, later in the season it becomes blue, and, towards winter it changes to a light green.

THE NONPAREIL (*C. ciris*.)

Belongs to the Southern States. It is in great demand because of the beauty of its plumage and the sweetness of its song. They thrive well in captivity.

CARDINAL GROSBKAK, (*Cardinalis virginiana*.)

The color of this bird is a bright carmine, and it has an elongated crest of the same color. It is found in the eastern part of the United States and is a fine singer.

BUNTINGS.

There are several varieties—Yellow Hammers, Bunting Larks, Reed Buntings, Cirl Buntings, Ortolans, etc. They are common in all parts of the world, and are known by their sharp, conical bills.

THE REED BUNTING

Is a frequenter of marshes and rice fields of the South. It possesses considerable cunning as is evident by the fact that when its nest is disturbed it will pretend lameness in order to draw the enemy away.

THE BOBOLINK

Is very much of a dude in his snowy dress of white, black and buff.

THRUSHES.

There are many varieties of Thrushes and they are usually remarkable for their melody of song and their imitative powers. Most notable of the members of the Thrush family is the

MOCKING BIRD.

There are few songs or sounds that it does not imitate so perfectly as to deceive the most experienced ear.

THE CAT BIRD, (*Minimus carolinensis*.)

This is a bird of modest plumage, found in the United States and Southern Canada. Though quite a mimic, it has an original and pleasing song of its own. It some-

times sings for an hour without cessation. It feeds on insects which it seizes in the air and near the ground, like a flycatcher.

THE SONG THRUSH (*Thurdus musicus*.)

This bird stands in high favor among British birds, we are told. It sings a great part of the year, and its song is particularly pleasing, being rich, mellow, prolonged, pure in intonation and varied in notes.

THE HERMIT THRUSH (*H. pallosi*.)

This is one of the most conspicuous members of the Thrush family, and is really a pretty bird. It migrates with other thrushes. Its song is flute-like and sweet. Early settlers in the Adirondacks called the Hermit Thrush "The Swamp Angel."

STARLINGS (*Sturnus Vulgaris*.)

It really is a good mimic and may be taught to talk. The size of the Starling is about that of the Thrush. Seen at a distance it is apparently black, but a nearer view reveals the fact that its plumage is beautifully streaked with green, purple and steel-blue.

THE WEAVER BIRDS.

There are a large number of Weaver Birds in the collection, including the Red-beaked, the Olive, the Red-faced, the Orange, and the Black-bellied. They inhabit Africa and India.

THE SOCIABLE WEAVER BIRDS,

of South Africa build their nests in large Mimosa trees. Several hundred of these nests will be found under one general roof. Sometimes the weight of one of these aerial cities becomes too great for the tree to support and it gives way. They then desert their nests and build on other trees. An examination of one of these deserted cities revealed the fact that it was laid out in regular streets with nests on both sides, facing each other and about two inches apart.

BLACK BIRDS (*T. Merula*.)

Blackbirds, Orioles and their kindred, forms the link between the Finches and Crows. One of the most prominent is the

EUROPEAN BLACKBIRD (*Turdus merula*.)

This is another constant singer, and likewise a clever mimic. It does not stand in high favor with gardeners who think it robs them of their fruit.

THE YELLOW-HEADED BLACKBIRD (*X. Icterocephalus*.)

This bird is found in southern North America. Its head, neck, throat and breast are yellow, but the rest of its plumage is black. Its habits are terrestrial. It is often seen in company with the cow-bird, running about with the cattle.

THE PURPLE GRACKLE.

This is nothing more nor less than a common blackbird, with which every school child in this country is familiar.

THE COW-BIRD (*Molothrus ater*.)

This is a wicked little bird. It seems to have no conception of the principles of right, justice and morality. It lays in the nests of other birds, and its offspring being larger, obtains the greater amount of food and its foster companions soon either smother or starve.

THE ORCHARD ORIOLE (*Icterus spurius*)

This bird is an insect eater, but also has a fancy for vegetation. It wages efficient war upon plant lice, beetles, rose slugs and cabbage worms.

THE BALTIMORE ORIOLE, which is a veritable fiend for cherries.

THE AMERICAN ROBIN.

Most people, if at all observant, are familiar with this bird, whose cheery, hearty song is so frequently heard.

THE CHEWINK, OR GROUND ROBIN,

Has a clear, ringing song, the peculiarity of which gives it the nick-name "Tow-hee." Its nest is large and always concealed by underbrush. It is called ground robin because it builds its nest on the ground.

THE MAGPIE.

One of the most amusing birds in captivity is the magpie, who is always gay and rollicking in his good humor — which resembles in its effervescence that of the plantation darkey. He is a "natural born thief" and robs other birds' nests with impunity. He keeps in well wooded districts, and out of the way of hawks, which are his deadly enemies. His plumage is gay and beautiful.

THE BULLOCK'S MAGPIE JAY,

From Mexico, an elegant bird, closely resembling the European species.

ORDER PICARLAE

The members of this order are quite numerous and though very dissimilar in form, possess a sufficient number of similar characteristics to warrant placing them in the same ordinal rank. Among the most conspicuous of the order are the members of the Parrot family, which are well represented in our Aviaries. The gaudy plumage of the Parrot, and its marvelous powers of mimicry, have attracted the attention of mankind for centuries. It is one of the most extensive of bird families, having nine branches, forty-five genera and no less than four hundred and forty-two species. Parrots are most abundant in tropical regions, but one species ranges far north in America. There are a great many species in Australia. They can be recognized by the shape of their beaks, which are very large, with the upper mandibles very much curved and hanging over the lower. The tongue is thick and short. The wings and tail are generally long. The Macaws have tails of great length, and in most of the Parrakeets it is longer than the body. They differ very much in size, some of the species being three feet long while others — as for example the Love-birds — are but a few inches. Their voices are harsh and they can be taught to talk. One of the most familiar members of the Parrot family is

THE GREEN PARROT.

It is quite common as a cage bird. It is the most intelligent of the Parrots, and readily learns to repeat phrases and expressions which it hears. They are attractive because of their brilliant, green plumage, which makes them quite conspicuous against a dry branch, but serves to conceal them in green foliage. There are several beautiful specimens in our collection, including the Yellow-fronted, White-fronted, Yellow-cheeked, and White-cheeked varieties.

THE GOLDEN BOLIVIA PARROT

Is remarkable for its plumage which is a rich, golden yellow, the wing feathers being a dark green. It is found in South America.

THE GRAND ECLECTUS

Has always attracted great attention on account of its rich and beautiful coloring. Its color is deep scarlet, the tail feathers being tipped with golden yellow. It inhabits the Moluccas and other islands.

THE MACAWS

are natives of Central and South America, and are remarkable for their great size. In captivity they feed on fruits, corn, hemp and sunflower seed. They fly at great elevations, and are fond of aerial evolutions. They are usually found in pairs, but sometimes assemble in flocks, when they are always in a conversational mood and grow quite noisy.

Our collection has a large number of Macaws, including the Red and Blue, the Military, the Blue and Yellow, and the Red and Yellow.

THE COCKATOOS.

We always have a large variety of representatives of these birds. Their grotesque actions, their apparent self-esteem, and their cry, "Cockatoo!" makes them very amusing. Among those usually found at the Zoo are the Slender-billed, the Roseate, the Lesser, the Blue-eyed, the Great Sulphur-crested and the Leadbeater's. The Leadbeater's Cockatoo is a remarkably handsome bird. It was named in honor of the naturalist who first brought it to Europe. Its crest is crossed with white, yellow and crimson, and it can raise it over its head like a fan. It is a native of Australia.

THE PARRAKEETS.

The smaller members of the Parrot family are called Parrakeets. The Carolina Parrakeet is a species found in the United States, now rapidly becoming extinct. Its greatest enemy is its curiosity. If one of a flock is killed, the others will alight to see what has happened. Thus they are readily captured. The *Love-birds* are so-called because of the great affection which members of the opposite sex display for each other. It is said that when a pair is kept in captivity, if one dies or is taken away, the other cannot long survive its loss, dying of a broken heart. Among those usually found in our aviaries are Passerines, Rose-bills, Ground and Tree Parrakeets.

One of the most interesting birds in the collection is

THE GROUND HORNBILL (Bucorvus abyssinicus.)

It is a large, heavy bird with a bill 16 inches long, and 2½ inches thick at the base. Its bill has a helmet. The color of the Hornbill is dull black. Its food consists of both animal and vegetable substance. It is fond of rats and mice. Catching them, it presses them flat in a peculiar manner with its bill, then tosses them up in the air, and, as they descend, catches them and swallows them whole. This species inhabits Africa. The one now in our possession is the only one in America.

THE TOCO TOUCAN, (Ramphastus tucanus.)

Is about the size and shape of a Jackdaw, and has a large, flat head to support its enormous bill. It is easily tamed and will eat almost anything offered it. It builds its nests in the holes of trees. It is a native of Guinea and Brazil.

THE GIANT KINGFISHER, (Dacelo gigantea.)

Derives its name from its cry, which resembles a hoarse laugh, more startling than the cry of the hyena. It is a bird of considerable size, being about 18 inches long. The novice traveling in Australia will become thoroughly frightened at hearing its cry. It is inquisitive and will approach a camp fire and set up its peculiar, abrupt cry. Under such circumstances it is frequently shot, cooked and eaten. Owing to the fact that it is more noisy at sunset and sunrise, it is sometimes called "the Settler's Clock." In captivity the kingfisher feeds on chopped beef and occasionally live mice.

ORDER COLUMBAE

This order is also well represented in our ornithological collection. The numerous varieties of Pigeons and Doves belong to this order. One of the best known species of Pigeon is

THE WILD OR PASSENGER PIGEON, (Ectopistes migratorius.)

This species has become almost extinct, though a score of years ago they were com-



Photo by Enno Meyer

"KING OF BEASTS"



Photo by Enno Meyer.

CARNIVORA BUILDING

mon in this country, appearing in flocks numbering hundreds and thousands. Pigeon hunts were immensely popular throughout the Ohio Valley at that time. These pigeons possess the power of rapid and long sustained flight. A potent illustration of this is the fact that pigeons have been killed in the State of New York whose crops contained undigested grains of rice which must have been swallowed in South Carolina or Georgia. They fly in large columns miles in length and width.

One peculiarity of pigeons is that they drink, while other birds scoop up the water and then, rising their bills, swallow it. There are about 500 species of pigeons, THE CROWNED PIGEON (*Goura coronata*)

is most conspicuous because of its size and stately mien. Its fine crest is always expanded. It has a deep and uniform slate-blue color. It is a native of Java, New Guinea and the Moluccas.

THE NICOBAR PIGEON (*Caloenas nibbarica*)

is another notable species. It has long feathers on the neck and breast forming a collar. Its general plumage is green, and its tail feathers are white. It is a heavy, fleshy bird, with very large wings, and it can fly a long distance. It feeds on the ground and roosts in trees. Besides the above mentioned pigeons, Blue-headed Pigeons, Spotted Pigeons, Crested Pigeons, White-crowned Pigeons, Fan-tail Pigeons, and several other varieties are usually to be found in our collection.

ORDER GALLINAE

This Order, which, as said on a previous page, has a number of representatives in the Pheasant and Fowl Enclosure, is also well represented in the Aviaries. It includes Pheasants, Partridges, Pea-Fowls, Guinea Fowls, etc. Among the Pheasants usually found here are the Golden, the Silver, the Common, the Rufus-tailed, the purple Kaleege, the Ring-necked, the Amherst's, the Horned Tragophan, the Rieves, the Peacock, etc.

PARTRIDGES.

It is to this family that our common quail belongs. Everyone is familiar with "Bob White." The species in our collection usually include the Scaled Blue Partridges, the Mountain Partridges, and the California Valley partridges.

THE CRESTED CARIAMA (*Cariama Cristata*)

is a bird isolated from the other species. It is found in South America. It stands two feet or more in height, is gray above and dull white beneath. Its legs are red. The skin around its large, yellow eye is greenish-blue. Its food is almost exclusively animal. One of the species has a horned protuberance on the head and runs with poultry, which it defends from rapacious birds.

THE SQUIRREL ENCLOSURE

Beyond the Aviaries and on the same side of the avenue will be found the Squirrel Enclosure, which surrounds a large tree. Here a large number of squirrels live happily and contentedly. They are quite tame, becoming readily accustomed to visitors. Squirrels belong to the

ORDER REDENTIA

Which includes all animals that are gnawers. Members of this order have no canine teeth. They have two upper and two lower incisors for gnawing bark, roots, stems, nuts, etc. These incisors are long and sharp, and are slightly curved. They are deeply rooted in the jaw where they receive a pulpy, nutritive substance that causes them to grow out as fast as they are worn away, which is quite rapidly because of the severe friction of the gnawing. Sometimes an incisor is broken off. The incisor op-



"BRUTUS"

Photo by Enno Meyer

posite then grows without being worn away and continues to curve until it locks the jaw, thus compelling them to starve to death. Among the most prominent members of the order are Hares, Guinea Pigs, Porcupines, Rats, Mice, Gophers, Musk-rats, Beavers, Prairie Dogs, and Squirrels - the inhabitants of this Enclosure. Most of the rodents are represented in our collection, as we shall find by continuing our tour of the Gardens. There are a great many species of Squirrels. Those found in this enclosure are Black Squirrels, Gray Squirrels, Fox Squirrels, Ground Squirrels and Flying Squirrels. The latter are so called because they take such long leaps in mid-air that they appear to fly. They are enabled to do this because they have a parachute extension of the skin connecting their fore and hind legs.

THE PONY AND ELEPHANT TRACK

We will have our attention directed to the Pony and Elephant Tracks - if indeed we have not noticed them before. Here are kept from twenty-five to fifty ponies and donkeys - including a number of beautiful Shetland Ponies. There are a number of pony carts and phaetons also, and the children will greatly enjoy a canter round the track, seated upon a pony, or a drive in one of the carts or phaetons. Hatnee, the good-natured old elephant, is also usually here, in charge of her keeper, ready to give all who desire a ride on her broad and powerful back. Near by is a nice little summer amphitheatre where visitors may rest and watch the fun that is always going on in this department. The pony track is oblong, and the distance around it is a quarter of a mile. The track for the elephant and camel riding is in the center of the space enclosed by the pony track.

ELEPHANTS.

There are two distinct species of Elephants. The Indian Elephant (*Elephas indicus*), inhabiting Asia. And the African Elephant, (*Elephas africanus*) The latter may be distinguished from the Asiatic by the dimensions of the head which is much shorter, rounded and somewhat convex. The ears are of enormous size, covering the back of the head and neck. In the African species both the male and female have tusks, those of the male being larger and heavier than those of the female. Unlike the Asiatic Elephant the African has three toes on its hind feet instead of four. It is also larger in size than the Asiatic species. Elephants cannot stand cold, and suffer equally from excessive heat. In their native element they avoid the burning rays of the sun by penetrating into the thickest forest. All elephants are fond of bathing, their large body being of great advantage to them in swimming. When they swim in deep water they erect their trunk through which they breathe, and by doing so they have no fear of being drowned. The Asiatic Elephants are generally supposed to be more intelligent and docile, also much superior in strength, than those of Africa. The average height of the Indian Elephant is about eight and one-half feet. At the age of thirty years the Elephant reaches maturity. The period of gestation is twenty-two months. The female brings forth only one young at a time. Some authors have claimed that the young Elephant nurses with its trunk, but it has since been ascertained from reliable authority that the young Elephant nurses with its mouth, like other animals. The young grasps the nipple with the side of its mouth. When in danger the mother takes her calf between her fore legs and holds it close to her with her trunk.

With good care, the elephant lives a long time while in captivity. Some authors claim they live one hundred and twenty-five and even one hundred and fifty years, but it is supposed that seventy-five to one hundred years is about the life of the Elephant.



Photo by Enno Meyer

FEMALE LION — "FLORA"

HATNEE,

the large female Indian Elephant, is about twenty-eight years old. She was purchased in 1880. Hatnee is considered one of the best tempered animals in captivity. She is usually found at the Pony Track, in charge of her keeper, ready to give visitors a novel ride.

The principle food for Elephants in captivity is hay, oats, bran, carrots and potatoes.

THE CARNIVORA BUILDING

Opposite Aviary No. 7, we will find a magnificent building of stone and iron known as the Carnivora building, though as a matter of convenience a number of animals that are not carnivorous will usually be found here, as well as a number of stuffed specimens—birds and animals that have died at the Zoo and whose outer semblance has been preserved by the taxidermist. This building is 125 feet long and 60 feet wide, and there are a number of summer cages on the south side. This large and handsome



Photo by Enno Meyer

BABY LION—"MCKINLEY"

structure cost \$20,000. Among the most notable animals of the carnivorous nature found in this building are a number of species of the

FAMILY FELIDAE

Or, in common phraseology, the Cat Tribe. The members of this family begin with the ordinary house cat and culminate, so far as strength, size, magnificence, and ferocity are concerned, in the lion which haunts the jungles of Asia and Africa. So far as structure, characteristics and habits of life are concerned there is but little difference. On the contrary, the cat, the leopard, the jaguar, the tiger and the lion possess so many similar characteristics of form and action that they are included together, with other close kin among animals, in one great family—the Cat Tribe. Of a strictly carnivorous character, relentlessly destructive in their methods of obtaining food, the structure is of that character that enables them to gratify the merciless instincts of their nature. The house cat waits in hiding for the mouse, and seeing it, pounces up-



MALE TIGER

Photo by Enno Meyer

on it, kills it and devours it - the leopard, the tiger, the lion. pursues exactly similar methods in surprising, capturing and killing their prey. And nature has supplied them with all the essential of structure for so doing. Their bones, though fitted for the attachment of a powerful muscular organism, are light. Their muscles and tendons are as hard and well tempered as the steel in a Damascus sword. They are light, stealthy, and noiseless of foot, so that oftentimes the first warning of danger that the victim has is the cruel pain of the teeth of the silent enemy fastened in his quivering flesh.

THE LION (*Felis Leo*.)

The lion is called "the King of Beasts." He is given this name by those who regard him as the superior of all other animals in point of bravery and ferocity. He adds to the possession of a fear-inspiring form and the proud mien of a monarch the ownership of a loud and terrible voice whose reverberating roar seems almost to shake the earth. The lion, notwithstanding these awe-inspiring characteristics, is not so dangerous as he seems. Some animals kill simply for the pleasure of killing. The lion kills only in self-defence or to secure food. He lies in ambush for his prey. He is nervous and easily abashed as is evidenced by the fact that, in springing upon his victim, if he misses him, he will not repeat the attempt, but will sneak back to his hiding place with an ashamed and disappointed manner. He will attack any kind of animal, no matter how large, and is so powerful that he can carry off an ox. This is remarkable, considering that his average height is only four feet, and his length eleven feet; the lioness is not so large.

At present they are found in Africa and southern Asia. They vary in size, color and appearance, but there is not much difference between the African and Asiatic lions. The color varies from a deep-red chestnut brown to a silver gray. The color of the lion, blending so perfectly with the landscape as it does, often protects him from discovery and enables him to approach nearer to his doomed though unsuspected prey. They have tufted tail, and the male is adorned with a large, flowing mane that adds much to the ferocity of his appearance. Old lions, whose teeth are worn down, are called "man-eaters" because, being too old and weak to capture agile prey, they prowl about villages and carry away sleeping people at night.

The lion family at the Zoo is one of the largest in captivity. One of the most notable is Brutus, an African lion, born Nov. 16, 1892. He was born in Spain and trained for the arena. He became vicious, however, and was then purchased by our Company. He weighs over 700 pounds, and is said to be one of the finest and largest lions in captivity.

Flora is a lioness five years old. She was born at the Zoo. Her mother refusing to care for her, she was taken out of the cage and "raised with a bottle." She was very docile and was permitted to run at large in the Gardens until she was eighteen months old. Julia is a handsome African lioness six years old. She was purchased with Brutus in New Orleans. Besides these adult lions, we now have some attractive young lion babies just born.

THE TIGERS, (*Felis tigris*.)

The tiger, the only rival of the lion among the cat animals in strength and ferocity, is found exclusively in Asia. He is a magnificent animal, and his long, lithe body, with its beautiful black stripes upon a ground of reddish yellow, never fails to call forth the unstinted admiration of visitors. The disposition of the tiger is far more ferocious than that of the lion. The latter does not fly into a rage unless provoked, but the tiger is fierce without provocation and has been known to kill and devour its own young.

At present we have a magnificent pair of tigers in our collection. Also three beautiful baby tigers now 6 months old, which were raised by dogs, their unnatural mother refusing to care for them 3 days after they were born.



LEOPARDS

Photo by Enno Myer.



Photo by Enno Meyer.

NORTH AMERICAN BISON

THE LEOPARD (*Felis pardus*)

One of the most graceful of the cat animals is the leopard. Its color is reddish fawn, the body being marked with dark spots. Here again is noted the admirable work of nature in harmonizing its color with that of vegetation, enabling it to easily conceal itself. The leopard, unlike the lion and tiger, is a tree-climber, and from its elevated perch on an over-hanging bough, often springs upon the unwary traveler or animal. It preys on sheep, goats and other herbivorous animals. It has a fondness for dog meat, hunts monkeys, but is afraid of the vigorous heels of a donkey, which it lets severely alone. It is found in Africa and Southern Asia. In captivity some leopards become very tame. The leopards in our collection are very fine animals. We have had them for several years. The female is quite a pet. We also have a very fine baby leopard, born on Christmas morning, 1899.

THE JAGUAR (*Felis onca*)

The Jaguar is found exclusively in South and Central America, and it bears a close resemblance to the leopard. It is more clumsy than the leopard, and is larger, measuring four to five feet from the nose to the root of the tail. His head is larger and rounder than that of the leopard, and his limbs are shorter. The Jaguar, like the leopard, is a spotted cat. However its markings consist of dark rings with smaller spots within them. Its coat harmonizes with the tropical foliage, and enables it to glide along unseen in pursuit of monkeys or other prey. It is a sullen, savage, solitary animal. It appears to approach very nearly in fierceness and strength to the tiger. The specimens in this building are very fine.

THE PUMA (*Felis concolor*)

Except the Jaguar, which is found only in South America, the Puma is the largest and most powerful of American Cat animals. The Puma ranges from the northern part of the United States to Paraguay in South America. The Puma is also called the Cougar, the Panther, the Mountain Lion, the American Lion, etc. There is only one species, but the color ranges from red to silver gray. The Puma preys on monkeys, deer, calves, pigs, etc. It seldom attacks a human being, though its wierd cry in the still hours of the night often struck terror to the heart of the pioneer in the solitudes of the "forest primeval." The specimens in this building are especially fine.

THE OCELOT (*Felis pardalis*)

The members of this species are found in Mexico and Central and South America. They are called tiger cats. They are not much larger than the domestic cat. They are beautifully striped and their skins are highly prized. They are quick, active and powerful, and have the instincts of the leopard. There are several kinds, the most prominent of which are the common, the grey and the painted. There are several very fine specimens of the Ocelot in the Carnivora Building.

THE HYENA.

The members of this family form a sort of intermediate class between the Cat and Civit families. There are but three species, the spotted, the striped and the brown—and they are all found in the warmer regions of the Old World. They resemble the Dog family from which they are particularly distinguished by having the fore legs larger than the hind ones. Although a repulsive looking animal, with disgusting habits, they are very useful in preserving the health of the people in the countries in which they are found. They are scavengers, preferring carrion to fresh meat, and only seeking the latter when the former cannot be found. They are of a very cowardly disposition, not daring to attack any animal, however small, that dares to face them.

THE SPOTTED HYENA

Is found in Africa, south of the Sahara. Its general color is yellowish brown



Photo by Enno Meyer

RAISING YOUNG TIGERS

covered with spots of blackish brown, excepting the under parts. Like the other species it has jaws of great strength, with which it easily crushes the hardest bones. It is erroneous to suppose that the Hyena is untameable. Both striped and the spotted specie have been tamed in menageries. The Striped Hyena is also sometimes called the Laughing Hyena because of the "maniacal, mirthless, hysterical laugh which it pours forth."

Our collection contains two very fine specimens of the
STRIPED HYENA (*H. striata*)



Photo by Enno Meyer.

STRIPED HYENAS

THE VIVERRIDAE

The Viverridae include the members of the Civet family, the Ichneumons of Africa and Asia, etc. One of the most handsome is

THE CIVET CAT (*Viverricula indica*)

It is a native of northern Africa. It is about two and a half feet long and twelve to fourteen inches high. Its tail is the length of its body. Its hair is long, and the color is brownish gray, banded or irregularly spotted with black. A sort of mane runs down the center of the back from between the shoulders, and this can be erected at will. The perfume of the Civet is strong, though agreeable.

THE ZIBETH CAT (*Viverra Zibetha*)

Is a native of India. It has more white in its fur than the Civet; has shorter hair and a greater number of dark rings on its tail.

THE GENETT CAT

Is smaller than the Civet. A long body, short legs, a sharp snout and a slender head are its characteristics. It has smooth, glossy, ash-colored fur, marked with black stripes, separating on the sides and uniting on the back. Its tail has seven or eight rings, alternately black and white.



Photo by Enno Meyer

"BRUTUS"—KING OF CARNIVORA

THE COMMON PARADOXURE (*Paradoxurus typus*)

This animal is about the size of the ordinary mink. It is partly arboreal in its habits. It is a native of India.

THE RING-TAILED BASSARIS (*Bassaris astute*)

For several years after its discovery this interesting animal was erroneously supposed to belong to the group of Civets, but more recent anatomical discoveries have led to its recognition as a member of the Raccoon family. It was formerly quite common in Texas and Mexico. Miners and ranchmen tame it. It becomes just as much domesticated as the house cat, is playful, and wages destructive war on mice. It is nocturnal in its habits. Like the raccoon, it feeds on nuts, insects and small animals.

THE BROWN COATI (*Nasua rufa*)

This animal is another member of the Raccoon family. Its total length, including its tail, is about three feet. It has a long snout which serves many purposes. It is a ready climber and always goes head first, whether ascending or descending. It is a formidable fighter when wounded or irritated. There are two varieties—the Brown and the Red. It is a native of Central America. It seems to enjoy captivity.

OTHER INMATES OF THE CARNIVORA BUILDING

Besides the members of the Cat family and smaller Carnivora, a number of other animals are also kept in the Carnivora Building. One of the most interesting is

THE HIMALAYAN BEAR (*Ursus tibetanus*)

This and the Malayan Bear belong to a group of *Ursidae* called Sun Bears. It is distinguished from the Malayan and the large-lipped bears by its thick neck and flat head. A short, thick mane decorates each side of its neck and it has a V-shaped white spot on its breast. It, like the Malayan, has a habit of basking in the sun, from which it derives its name Sun Bear.

THE MALAYAN, OR SUN BEAR (*Ursus Malayanus*)

The head of the Malayan Bear is not flat, but is rounded above, rising to an arch immediately behind the nose. It has a mouth capable of great expansion, and a long, narrow tongue which it can extend almost a foot. Its claws are long, sharp, and admirably adapted for digging. Its fur is soft, short, black and glossy. It has a V-shaped spot of orange on its breast. It is highly susceptible to training and when trained is docile and amusing.

THE KINKAJOU (*C. candivolulus*)

This curious animal is found in Central and South America, and what place to assign it in a classification of animals has been a puzzle to zoologists. However, it is now considered to be related to the Ursine family. In appearance it resembles the Lemurs. Its color is very light dun. It possesses a tongue of great length, which it can extend almost in its entirety and which it can insert into small crevices in search of insects.

THE FERRET (*Mustela furo*)

This animal is the mortal enemy of rabbits and rats, and it is the constant companion of the rabbit hunter and the rat catcher. It is a species of pole cat. It is a small animal, but active and relentless in its pursuit of prey. It is originally a native of Africa. We have two varieties in our collection—the white or light cream colored and the dark brown.

THE AFRICAN PORCUPINE (*Hystrix cristata*)

This is one of the most interesting of the Rodentia. The name is derived from the French and means "spiney pig." It has its body armed with long, strong spines



Photo by Enno Meyer

THE QUEEN OF CARNIVORA — "JULIA"

which it can erect at will, thus presenting a "battlement of spears" on all sides when attacked. It is about two feet in length from the head to the extremity of the tail. The spines are sometimes fifteen inches in length. Some naturalists say that this animal has the power of discharging its quills and wounding its foes at long distance, but that is only a product of the imagination. Our collection comprises two Java (H. javanica) and one African Porcupines.

THE CANADIAN PORCUPINE

Is a native of North America and is very destructive to the trees among which it lives. Its chief food is bark, which it ruthlessly strips from the living branch, as clean as if with a sharp knife.

THE GOLDEN AGOUTI (*Dasyprocta aguti*)

The Agoutis are small animals inhabiting South America and the West Indies. They are vegetable feeders and do great damage to sugar plantations by gnawing the roots of the cane. The hair of the Golden Agouti is thick and falls heavily over its hind quarters, almost concealing its little, pointed, stumpy tail. The color of the hair on this part of the body is a bright, golden brown.

THE SPOTTED CAVY (*C. sibiriger*)

Cavy is a name applied to several species of Rodents that inhabit South America. They do not exceed a foot in length, burrow in the ground and feed entirely on fruit and herbs. The Guinea Pig is derived from the species known as the Restless Cavy. The Spotted Cavy, several specimens of which are in our collection, is very prolific, bringing forth young in abundance. Large animals wage destructive war on them, and yet they are still numerous.

THE PECCARY (*Dicotyles torquatus*)

Is a species or Wild Hog that inhabits South America. There are two varieties, the Collard and the White-lipped. The latter is the larger and fiercer in disposition. It derives its name from a band of white hair that crosses the upper jaw and covers nearly the whole of the lower. The food of the peccary consists of fruits, grain, vegetables and roots. In disposition it is as terrible as the Wild Boar of India. And it is such a dangerous foe, especially when in herds, that even the Jaguar avoids it. Its small tusks are fearful weapons, being pointed, shaped like a lancet, double edged. They cut like knives. Their home is usually the hollow of a fallen tree or the burrow of an Armadillo or some other animal that they have driven out. They do great damage to cultivated lands. A hunter who encounters a herd of them in a forest must take to a tree for safety. If one of a herd is wounded, the rest will fight in its defense.

MR. AND MRS. ROONEY

Mention has been made of the mounted Chimpanzee in the Carnivora Building. This is one of the pair of Chimpanzees known as Mr. and Mrs. Rooney, which were formerly such great attractions at the Gardens. They were so named because of the fancied resemblance of the male to the well-known actor, Pat Rooney, when made up for his work on the stage. At one time Mr. Rooney's manager threatened to bring suit against the Zoo for the liberty taken with the name of his star. Mr. Rooney, the actor, however, never bore any malice. About two years before his death he visited the Zoo for the purpose of seeing his namesake. While standing before the cage the male Chimpanzee thrust his head between the bars and pursed up his lips in a comical manner. The actor was convulsed with laughter, and, throwing up his hands, said in his stage brogue, "Howly smoke, but isn't he loike me."

This pair of Chimpanzees lived at the Gardens for nearly six years. They were bought in July, 1888, and it is supposed that they were about three years of age at

that time, the female being somewhat older. The male died in 1894 and the female survived its mate but four months. They both succumbed to that dreaded disease—consumption. At the time they were brought to the Gardens they exhibited remarkable intelligence, and it was found they were quite susceptible to teaching. They were taught to eat at the table, using a knife and fork, and when eating rice to use a spoon. They drank their tea out of a cup carrying it steadily to the mouth without spilling its contents, and setting it down carefully. They also used a napkin after each meal. Frequently the male would try to imitate the keeper in washing the windows in front of his cage. They died in 1893. Since then they have been replaced by another male, Pat Rooney II, which we now have.

THE SIX-BANDED ARMADILLO (*Darypus sexcinctus*)

This is a native of Central and South America. It is a harmless animal. The armor is similar in all species and consists of large plates of horny covering. A series of bony rings overlap one another, permitting the animal to move freely. The Armadillo is a relative of the Ant Eater and both belong to the order *Edentata*.

COMMON RABBITS (*Lepus cuniculus*)

In a cage adjoining the Armadillos are a number of domestic rabbits and wood hares. The term Grey Rabbit is very commonly used to designate both varieties. The hare does not burrow.

THE GUINEA PIG (*Cavia porcellus*)

The original home of the Guinea Pig is in South America, but it has become domesticated in all parts of the world. It is an inoffensive and defenseless animal. It is lively, though lacking in intelligence. It quarrels with its fellows, but is gentle toward other animals. Though called a pig, it is not one. It is a member of the Rodentia. Its color is variable—white, red and black. The bare portions of the skin are flesh colored. Its eyes are brown. It has no tail. It is a strict vegetarian in its eating.

THE WOODCHUCK (*Arctomys monax*)

The Woodchuck is known in this part of the country as the ground hog. Everyone is familiar with the superstition which says that the weather for six succeeding weeks depends on the ground hog seeing or not seeing his shadow on the second of February. The Woodchuck makes his home on the side-hill.

MOUNTED BIRDS AND ANIMALS.

The art preservative of the taxidermist is illustrated by a large number of fine specimens distributed throughout the Carnivora Building. The largest is the mounted skin of old "Chief"—the vicious elephant which had to be killed at the Zoo a few years ago and a full history of which is given in this book. It stands along side of his skeleton in a mammoth glass case. Above the eastern entrance is a group of mounted lions and tigers, and the only baby giraffe ever born in America. It was born at the Zoo and lived but five or six days. There is also a fine mounted giraffe, one of a pair purchased in 1877 and kept on exhibition at the Zoo for sixteen years. This was one of the tallest giraffes in captivity, being eighteen feet in height, and with his head erect could reach twenty feet above the ground. The female survived its mate. She was sold in 1895 to the Barnum & Baily Show, her age at that time being about twenty years, and it was for this reason that the Society deemed it best to part with her. The European agents of the Zoo have a standing order to secure another pair of young giraffes for our collection. The giraffe is the tallest of all animals. Its enormous statue is owing to the extraordinary long neck and legs. It chews its cud as all horned animals with



Photo by Eano Meyer.

PONY AND ELEPHANT TRACK

cloven hoofs do. In its wild state it eats the leaves of the Mimosa ; its food in captivity consists of carrots, onions, bread, oats, bran and hay. When walking, it has a stately and dignified appearance, but when it trots it looks very ridiculous. Its mode of defense, like that of the horse, consists in kicking with its heels ; thus it may defend itself against the lion. Its hind legs are very light and their movements so rapid that the eye cannot follow them. In early youth the hide of the giraffe is a light red, but it deepens as the animal advances in age until it becomes a yellowish brown in the male, and in the female a brown bordering on black. Giraffes never make any noise whatever. They are natives of southern Africa.

THE ELEPHANT "CHIEF"

In 1872, Charles Richie & Brothers, animal dealers in New York City, imported a pair of young elephants - Chief and Princess. They were sold to the American Racing Association, which was composed of Messrs. R. E. J. Miles, De Haven and other Cincinnatians. This Association failed and was stranded at Albany, New York, owing creditors between four and five thousand dollars. Mr. John Robinson bought Chief, Princess and one African elephant for his big show. They were all placed in charge of John King, who was a very reckless fellow. Desiring to make his position with the show good for life, he taught Chief to attack everybody that came near him, beginning with the little darkies that hung around the show. He thought by these means to make Chief so mean and wicked that no one else would ever dare to take charge of him, thus he would have a long-life job. He succeeded quite well in his teaching, inasmuch as Chief was an apt pupil. He became one of the most wicked and cruel beast ever exhibited. King was the only man that ever dared approach him, but his ascendancy over him was complete. For several years after this, Chief did not do any actual damage beyond killing an occasional horse. One night in September, 1880, the show arrived at Charlotte, North Carolina. It was the custom not to unload the animals until daylight, but King had been drinking and insisted upon getting his animals out anyway. He was warned by Mr. Robinson not to unload the elephants, but he insisted upon unloading Chief anyway. When he had gotten him out of the car, he thoughtlessly walked between Chief and the car. Chief, quick as lightning, turned and forced King against the car, crushing out his life. Chief then started out for a good time. He ran back among the wagons, smashing things generally. Then turning he struck a bee line for the town, making night hideous with his bellowings. The attaches of the show started out to recapture him, taking with them an elephant known as Old Mary. Chief was finally overtaken in one of the streets of the town. Seeing Mary, Chief immediately attacked her. He was no match for her in strength, though her superior in pluck and ferocity. Mary, however, put up a game fight, and it was certainly sensational in the extreme. While they were fighting, the men managed to get chains and ropes around Chief's legs. Having recaptured him, he was taken charge of by Jack Cotterell. This keeper and Chief got along very well for a year or more. One day, Chief threw Cottrell nearly thirty feet, landing him against the center pole of the tent and breaking several ribs. Cotterell then resigned his position. Chief's next master was Tom Stephan, a brother of the superintendent of the Zoo. Tom managed Chief successfully for two or three seasons, when he resigned to accept a government position. He was succeeded by Joe McQuade who continued as Chief's keeper for some time, but finally got tired, and a man by the name of Boone took his place. This was in the fall of 1888, when the animals were in winter quarters. One time Boon punished Chief most unmercifully for some action, and Chief got Boone around the waist and hurled him against a wall, injuring him severely.

As another instance of Chief's ferocity, it is said that on one occasion, when he

was being led over a covered bridge at night, he saw a man ahead of him, who was on his way through the bridge, and instantly charged upon him. Through some good fortune his tusks missed piercing the man, who was caught between them. The poor fellow dropped down through the timbers of the bridge to the road bed below, a distance of 25 feet, breaking his leg and injuring himself seriously otherwise. The man brought suit against the Robinsons, who compromised by paying him \$3,000.

One season Mr. Gil Robinson succeeded in subduing Chief. The show was traveling down the river by boat. Chief got into one of his tantrums, and Mr. Robinson had the boat landed at an island in the river. Chief was taken ashore by means of a block and tackle and then he was chained to a tree. He was raised several feet in the air and his legs chained together. Then they built a large bon-fire of hay, straw and fagots, and Chief was dropped into the flames and kept there for a few minutes until he squealed. While Chief was being thus tortured Mr. Gil Robinson stood by, talking to him and chiding him. Chief never forgot this incident and was ever afterwards more or less afraid of Mr. Robinson.

Finally Chief became so dangerous that the Robinsons were afraid to take him on the road with their show any longer and he was therefore presented to the Zoological Society. It was thought that he would here probably get over his dangerous proclivities, but this was not the case. During the winter of 1890 Chief became dangerously vicious; in fact it was the judgment of all who saw his actions that he was really insane. He was so dangerous that his keeper could not approach him except at the imminent risk of his life. It became necessary to kill him, and he was shot through the heart. Several shots were fired at him at close range, and he died within fifty-eight seconds of the first shot. Two bullets penetrated the heart, which weighed $32\frac{1}{2}$ pounds. The postmortem examination showed that the brain was diseased and confirmed the opinion that Chief was insane. The mounted skin and skeleton are magnificent specimens of the art of the taxidermist and were presented to the Gardens by Mr. Albert Erkenbrecher, for many years treasurer of the society.

THE REPTILIA

The visitor will not fail to notice the large collection of reptiles in the Carnivora Building, which includes some very fine specimens. The members of the *Reptilia* have cold blood—a little warmer than the atmosphere. They do not breathe by means of gills, but are provided with lungs. They possess a simple digestive apparatus. Some have two pair of limbs, others but one pair, and still others have only rudimentary limbs. Their skin is covered with scales or bony plates. Zoologists formerly included the *Batrachia*, such as frogs, toads, etc. in the *Reptilia*, but they are now separated in most classifications, though closely allied. Some, such as turtles, some lizards and saurians, live in water, others on land, and some are equally at home in water or on land. They are usually sluggish, though some species are lightning like in their movements. Others may be aroused from their torpor and lashed into an ecstasy of frenzy. The low temperature of the blood in reptiles is explained by the fact that the anatomical construction of the heart is such that at each contraction only a small part of the blood which it receives is conveyed to the lungs. All snakes have teeth. Those which do not possess venomous fangs have teeth of moderate size that point backwards; this prevents the escape of their prey, acting as valves that permit motion only in one direction.

The Snake family may be divided into three sub classes — the Vipers, which possess poison fangs; the harmless snakes, which do not possess poison fangs, and the Boa Constrictors, which, though their bite is non-poisonous, are almost as dangerous as Vipers, because they kill their foes and their prey by the constriction of their coils about the victim.

Vipers have no teeth in the upper jaw except two long and poisonous fangs. The lower jaw is well supplied with teeth. Both jaws are feeble in action. In proportion to the neck, the head is large and very wide behind. To this class of Vipers belongs the celebrated and dreaded Fer-de-Lance; also the Rattlesnake, which is a native of America and which is embraced in the family *Crotalidae*. This is a word derived from the Greek and meaning "rattlers." Moccasins and Copperheads also belong to this family. They have two fangs grooved and fitted to discharge the liquid poison which lies in a sac at their roots. The Rattlesnake sometimes grows to be six feet in length. It has a horny protuberance on the end of its tail called a rattler. Its whirring noise gives warning of its presence. It is supposed that the sections into which the rattler is divided denote the age of the snake, but this is an erroneous belief. There are fifteen species of Rattlesnakes.

THE NORTHERN RATTLESNAKE (*Crotalus horridus*)

Is one of the most common of this dreaded species.

THE DIAMOND RATTLESNAKE (*C. adamanteus*)

Is strictly a southern species, confined to the sea-board below the Carolinas. Its habits differ somewhat from the Northern, particularly in the fact that it is found in damp, shady places.

THE HARMLESS SNAKES

Are to be found in summer in an outside cage near the Club House. There are quite a number of these to be found in America. One of the most common is

THE BLACK SNAKE (*Bascanion constrictor*)

It is absolutely harmless, being devoid of fangs, though it frequently attains a size that its appearance is certain to cause fright. It is sometimes called the Racer because of its great speed. Though not a dangerous snake, it has an irascible temper, and will frequently attack the object of its wrath, inflicting a severe bite. Its haunts are the edges of streams, ponds and lakes, and it is most frequently found in shady places. Being fond of rats and other vermin, it is really a useful reptile.

THE INDIGO SNAKE (*Spilotes couperi*)

The color of this snake is a dark indigo blue. It resembles the black snake; however, it has a thicker body. Because it frequents the burrows of the gopher, it is sometimes called the Gopher Snake. It is quite common in Florida.

THE SCARLET KING SNAKE (*Ophibolus doliaatus*)

Is also an inhabitant of Florida, though it is found as far north as North Carolina. It is usually three feet in length.

THE CORN SNAKE

Is one of the most handsome of the reptiles. It is common in many parts of Florida, though not very frequently seen. It remains in hiding during the day, and as soon as the sun sets, it comes forth from its hiding place and renders service to man by catching rats and mice. Its general color is a rich chestnut red, with patches of a brighter and deeper red edged with black running along its sides.

THE PINE SNAKE (*P. melanoleucus*)

Also called the Bull Snake, is found in the eastern part of the United States.

THE CHICKEN SNAKE (*Coluber quadrivittatus*)

Is found in the Southern states. It gets its name because of the fact that it is an inveterate chicken thief. It enters farmyards and steals young chickens.

COMMON GARTER SNAKE (*E. serralis*)

These are found in all parts of America. There are several varieties.

THE COACH WHIP SNAKE (*Bascanium flagelliforme*)

This is peculiar to the Gulf states. It is so called because of its long and slender shape, resembling the thong of a coach whip. They are generally gray in color.

THE GREEN SNAKE (*T. rigidus*)

This is closely allied to the preceding species. It is also a native of America. Its color is grass green and it is singularly active.

BOAS AND PYTHONS.

As stated elsewhere, they have no poisonous fangs, but are regarded as dangerous snakes because they have a characteristic constricting organization. The name of Boa Constrictor is popularly applied to all of them, but true Boas are found in the tropics of the New World. The most prominent members of the constricting reptiles are the Anaconda and Boa of South America and the Python (*Python sabae*) of Africa. They kill their prey by compression, and the articulation of their jaws and lips admit of great distension, so that they can, without difficulty, swallow animals much larger than themselves. Many strange stories are told of the sizes to which they attain, but it is not probable that they are more than thirty feet in length. The ground color of the Boa is a rich brown, and a broad chain of rich, blackish horizontal spots and pale white runs along its back. These dark and pale spots alternate, forming a very pretty costume. Pythons do not differ materially in their habits from the Boas of the New World. They are found as far as the Malay Archipelago and the West and South of Africa. In our collection are a number of Tree Boas (*E. ongulifer*) that inhabit Cuba, the Common Boa of South America, and the West African Python.

While on the subject of snakes, it is well to call the attention of the visitor to the

SUMMER REPTILE CAGE

This is west of the Club House and usually contains several varieties of harmless snakes, such as the Black snake, the Coach Whip snake, the Garter snake, Say's King snake, the Pine snake and the Indigo snake.

THE CONSERVATORY

North of the Carnivora Building and not far from the pony track is the Conservatory where the plants are wintered. Adjoining it is the Power House, where the steam is generated for heating the animal buildings in cold weather.

THE YAK YARDS

These yards are occupied by four very fine specimens of the
BLACK YAK (*Poephagus grunniens*)

The Yak, or Grunting Ox, is found in the mountains of Thibet. In its wild state it possesses a sullen disposition, and uses its horns with terrible effect. It may be domesticated, however. It is related to the Bison. It is a very handsome animal, and has a proud, erect carriage. It has extremely long hair, which is used in the manufacture of various fabrics. Its bushy tail is highly prized by the Tartars, who employ it as an insignia of rank, and by the Chinese who paint it and use it as a fly-flapper.

THE AMERICAN BUFFALO

(BISON AMERIDANUS)

The thunder of the hoof of this animal, moving swiftly over the western plains, in herds numbering millions, is no longer heard. Like the Indian, it will soon be only a memory of the past. Hunting the Bison became not only a national but an international fad, and they were ruthlessly killed. Hamlin Russell says, "Buffalo Bill and his kind, with English 'sportsmen' and American army officers, vied with one another in the wanton slaughter." From 1872 to 1874 millions were killed, and the pursuit of them was kept up until they are now almost extinct. A small band is preserved in Yellowstone Park under the protection of the Government, and the leading Zoological Gardens of the world have a few specimens. The last small herd known in Colorado was shot by a party of foreigners, who crossed the ocean for the sole purpose of enjoying the renown of a bison hunt.

Though the Bison is a very large animal, sometimes weighing nearly a ton, it is exceedingly active, and marvelously fleet of foot. Its thick hair and shaggy mane make its body seem larger than it really is, and out of proportion to its slender legs. It has short, slightly curved horns, which it uses for defense, and in its search for food under earth and snow. If taken young the Bison may be domesticated. The herd in our collection numbers some fine specimens. One of them, "Bismark," is recognized as the most magnificent animal of its species in captivity



Photo by Enno Meyer.

GRAY WOLF

THE WOLF DENS

Few animals have so wide a range as the Wolf. They are found in Europe, Asia and Africa. In South America and Africa they are represented by Jackals and Foxes. Owing to their wide range they vary greatly in size, color and other characteristics, and several species have been named by naturalists which may only be varieties of the same species. At any rate, wherever found, the Wolf is in many respects the same—cunning, cowardly, voracious. It is one of the most interesting animals for the young naturalist if for no other reason than the fact that from its species originated man's most faithful friend among dumb creatures—the dog.



LARGEST BUFFALO IN THE WORLD

Our Wolf Dens are divided into four compartments. In the first are several specimens of

THE GREAT GRAY WOLF (*Canis occidentalis*)

The largest of American Wolves. Though not so large, it bears a close resemblance to the European Wolf. The specimens in this collection are from Texas.

THE PRAIRIE WOLF, OR COYOTE (*Canis latrus*)

Is a familiar object on our western plains. It is not so large as the Gray Wolf. Its color is gray—darker along the spine. It has a bushy tail and short, erect ears, white in front and brown behind. They hunt in packs and range from Mexico to British America.

THE BLACK WOLF (*C. occidentalis* var. *ater*)

Is thought by some naturalists to be only a variety of the Common Wolf and by others it is regarded as a distinct species.



THE WILD BOAR

(*SUS SCROFA*)

Is supposed to be the parent stock of all the varieties of the domestic hog. It has a short and thick body, straight ears, black bristly hair, and angular tusks which curve out and upwards. These animals defend themselves from the attacks of wild beasts by forming a circle, and showing a savage front to the enemy. They inhabit Europe, Asia and Africa.

KANGAROO AND OSTRICH ENCLOSURE



Meyer Photo KANGAROO

This department, while given the above name, contains other specimens also. It consists of a series of paddocks connecting with a building in the rear. In the first department is found

THE KANGAROO

(*Macropus giganteus*)

Which stands at the head of the pouched animals, and which is a native of Australia. There are many varieties, ranging in size from that of a full-grown man to that of a rabbit. The fore-limbs are very short and the hind ones very long. The long and powerful tail is used as a means of support and a weapon of defense. When it walks, it rests its fore feet on the ground, bringing its long hind legs outside of them. When pursued it travels rapidly in a series of jumps, sometimes clearing fifteen feet at a bound. The Kangaroo is esteemed for its flesh and for its skin, which is better than calfskin. Kangaroos are usually found in small companies conducted under the chaperonage of an old venerable individual. Their food is strictly

vegetable. The female produces only one young at a time, which she carries in her pouch—the object of her constant solicitude.

AFRICAN OSTRICHES (*Struthio camelus*)

In the next two divisions will be found some fine specimens of the Ostrich. The Ostrich proper is distinguished from the Rhea, the Enu and the Cassowary by having but two toes on each foot, being twice the size of the others, by having the head and neck bare of feathers, and by the beauty of its plumage. The brain of the Ostrich is very small in proportion to the size of that organ in other birds. The Parakeet's brain, as compared with the whole body, is as 1 to 45; the Eagle's is as 1 to 160, and the Ostrich's as 1 to 1200. Inasmuch as it is so foolish as to hide its head in the sand and imagines it is safe from the sight of its pursuers, it does not seem strange to know that it has such a small brain. Ostrich farming has become quite an industry in the Pacific states. The first Ostriches imported to California came from Cape Town, via Buenos Ayres and New York! Since then they have been farmed successfully at Anaheim up to the present time. Ostriches are found exclusively in Africa, and are sold at prices varying according to their breeding, capabilities and the quality of their feathers. Ostrich eggs require six weeks for hatching. The grown bird is about eight feet high and weighs from 250 to 300 pounds. The male bird is black and the female light gray. They are very hardy and requires no shelter in California. During the breeding season the male bird is very fierce, and will attack any one by

kicking forward. The male gives expression to a sound called "booming," which sounds like the roar of a lion. From forty to fifty feathers are taken from a bird in the plucking season.

In the next two compartments are

THE EMUS (*Dromatus nove-hollandiæ*)

which belong to the Ostrich family. They are, save the Ostrich, the largest species of birds known to man. Large specimens attain the height of six feet. They have feathers on the head and neck. The plumage is brown. They have three toes armed with claws. Emus pair and the male is quite attentive—even taking its turn at setting. The wings are very short and do not assist them in running as is the case with Ostrich. It is said that the flesh of its hind quarters bears a strong resemblance to beef. Its eggs are also valued as food.



Meyer Photo.

OSTRICH

THE RHEA (*Rhea ameincana.*)

This is another member of the Ostrich family, and does not attain a greater height than five feet. It is wonderfully swift of foot, but becomes easily confounded in the presence of danger. The natives hunt this bird on horseback in South America. They use a weapon called a "Bola," which is made by sewing a ball of lead into each end of a leather cord several feet long. They whirl this around the head, and let it fly at the running bird, entangling its legs, and permitting its capture.

THE ALPACA (*Lama pacos.*)

These animals are the most sheep like of the Llama tribe. Their hair is long, soft and silky and makes a beautiful fabric. The color is generally black. They are natives of South America.

THE HOG DEER (*Cervus porcinus*)

Occupy one of the compartments. These are very little animals. Their color is generally a rich golden brown. A brown stripe runs along the back. It is a frequenter of the thick grass of the jungles, and within easy reach of a stream.



Photo by Enno Meyer

HOG DEER

DEER AND CAMEL ENCLOSURE

The walk south of the Wolf Dens leads to the Deer and Camel enclosure. This is subdivided, however, containing not only the camels, but other animals as well—deer, goats, etc. Among them are

THE AXIS DEER (*Cervus axis*)

Of India. Their color is golden brown, the back and sides being covered with white spots. They are nocturnal in their habits. In the mating season the bucks are dangerous.



Photo by Enno Meyer.

AXIS DEER

— 50 —

THE WHITE FALLOW OR ALBINO DEER (*D. vulgaris* var *albo*)

Is pure white in color and has the palmated horns like the black fallow deer. This animal inhabits Europe.

THE ANGORA GOAT (*Capra hircus*)

Is found in Asia. Its soft, silky hair makes valuable fabrics, highly prized by civilized man. It has a gray undercoat of hair, and over this a protective covering of long, silken hair.

ZEBRA (*Equus burchelli* Chapmani)

Is perhaps the handsomest and most elegantly marked of all quadrupeds. This Zebra is chiefly found in Central Africa. It differs from the Burchell's Zebra by its



Photo by Enno Meyer.

WHITE FALLOW DEER

having the legs regularly marked almost down to the hoofs. With few exceptions the Zebra is nearly untameable.

THE CAMELS.

There are two species of the Camel — the Dromedary, which has but one hump, and the Bactrian Camel, previously mentioned, which has two humps. The former, which is by far the most useful, is a native of Arabia originally, where it is found in great numbers. Arabia is the driest country in the world and the Camel is the least given to thirst of all animals and can travel the burning sands of the desert for five or six days without water. Its feet are adapted for traveling in the stifling sand and its internal structure is such that it can store away a large supply of water before starting on a journey. It feeds on the hard and withered vegetation peculiar to desert countries. It is an exceedingly useful animal. A swift Dromedary will travel 10 miles an hour for 20 hours on a stretch. Its gait has a peculiar swinging, jerking motion that is terribly trying to the novice.



ZEBRA

Photo by Enno Meyer.

Returning from the Camel Enclosure, via the Wolf Dens, the visitor goes east towards the Bear Pits. The first paddock on the left contains

THE STAG, OR RED DEER (*Cervus elaphus*)

This is the noble animal which was formerly so plentiful in Europe, and now exists only in greatly reduced numbers, owing to the pursuit of it by hunters. It roams the wide forests no longer, but many fine specimens are preserved in private parks. The Red Deer is an expert swimmer and a good runner. It can be domesticated but is of an uncertain temper. The stags sometimes engage in the most terrific combats.



Photo by Enno Meyer.

RED DEER

THE BEAR PITS

The term *Ursidae* is applied to a family of animals widely distributed over the earth. Though confined to a very few species, they are exceedingly interesting because some species are very large and ferocious animals, while all possess curious and similar habits. Some zoologists claim that the Bears are not naturally carnivorous; they are so only from necessity. Their natural food seems to be roots, nuts, honey and insects, and they resort to carnivorous food only when they cannot secure that which is of a herbivorous character. They will not ordinarily attack men, but when they do so, the person attacked is certainly in imminent danger. The Bears are all plantigrade, walking on the sole of the foot. This enables them to walk on their hind feet, assuming an erect position with ease. All Bears, except Grizzlies and Polars, climb trees readily. The Cinnamon Bear and the Black Bear are both North American Bears.

THE BLACK BEAR, (*Ursus Americanus*)

Is the most familiar species in America, where it exists under a variety of names. It feeds on berries, fruits and succulent vegetables; it also has a *penchant* for raiding pig-stys. In size and form it resembles the Brown Bear of Europe and Asia, but the color is a uniform glossy, jet black, except on the muzzle, which is fawn colored. It is exceedingly fond of honey and will climb the loftiest trees in quest of it.

THE BROWN BEAR, (*Ursus arctos*)

As above indicated, is a native of Europe and Asia. It is a savage animal and its habits are solitary. It seeks unfrequented parts of the country. For a fierce animal, it is susceptible to training, and is frequently seen going through mimic performances in the ring, and dancing awkwardly to a rude song or a tune played on some musical instrument. In order to tame this animal, however, it is necessary to capture it young and hold it in restraint. Most keepers of such trained animals keep them muzzled. The weight of an adult Brown Bear is from 700 to 800 pounds.

THE POLAR BEAR (*Ursus maritimus*)

Up among the snow drifts and icebergs of the farthest arctic regions is found that magnificent species of the Ursidae, known as the Polar Bear. It seldom ranges below the 55th parallel. How far north it may be found is not known, but explorers have



Photo by Enno Meyer.

POLAR BEAR

found it on the 88th parallel, and it doesn't seem to be susceptible in any degree to cold, it may probably occasionally take a contemplative view of the landscape while sitting on the North Pole itself. It is the largest of the Bear family. It has yellowish white, soft hair, and an elongated, flat head, long neck and long legs. Its feet are large, and the soles are covered with hair, while its toes are connected by membrane. Thus has nature provided for its securing a foot-hold on icebergs, and facilitating its travel in the frozen regions of the north. Some of these animals attain a length of 9 feet. They feed on seals, fish, walruses, etc. These animals are captured in the water, and it is an expert swimmer, having no difficulty in capturing its prey. The splendid specimens in our collection were purchased in 1876. Two families of young Polar Bears have been born in captivity, but in each case the mother has killed the cubs. The largest bear, when in good condition, weighs over 900 pounds.

THE GRIZZLY BEAR (*Ursus horribelis*)

Is a North American animal, and is found chiefly in the Rocky Mountain chain and among the mountains of the Pacific Coast. It is so called because it has an intermixture in its fur of gray hair with black and brown. It is the most ferocious of North American animals. It bears some resemblance to the Brown Bear, but is much larger. Its forehead is slightly elevated, and its muzzle is narrow, flat and elongated. Its canine teeth are of great size and power. Its feet are immensely large; the breadth of the fore feet exceeds 9 inches, and the length of the hind feet, exclusive of the claws, is 11 inches, while the breadth is 7 inches. The claws are sharp, powerful and long, sometimes exceeding 6 inches in length. Thus by nature the Grizzly Bear is admirably adapted for digging up the ground for food, but it is unable to climb trees. His strength is something remarkable. He can drag off a bison with perfect ease. The magnificent specimens in our collection were purchased in 1875. They were just two and a half years old. Of all the 23 cubs born, only one has been raised.



Meyer Photo.

GRIZZLY BEAR

FOX AND SKUNK HOUSE

This building is divided into two compartments, the one containing a number of specimens of the Gray Fox of North America, and the other a number of Skunks.

FOXES.

There are fourteen species of Foxes known. These little animals are placed in the genus *Canis* by some naturalists, together with dogs and wolves, but more eminent zoologists have placed them in a separate genus *Fulvus* because the pupil of the eye in the Fox is elongated, while in the animals composing the genus *Canis* it is circular. All Foxes are more or less white beneath, and the tip of the bushy tail is usually white. A sharp muzzle, erect, pointed ears, and bright, alert eyes are their characteristics. Their food consists of rabbits, poultry and birds. The Fox is an inveterate thief and wrecks sad havoc on the poultry yard. It is exceedingly difficult to capture because of its extraordinary cunning. It seems to intuitively guess the design of the trap, and to discover it though it be concealed with the utmost care. The Fox is widely distributed, being found in all the temperate and northern regions of the Old and the New World.



Photo by Enno Meyer.

POLAR BEARS



BEAR PITS

Photo by Enno Meyer.

SKUNKS (*Mephitis Americana*)

Are found in all parts of North America. There are a great many varieties, differing generally in their stripes and markings. The food of the animal consists of young birds, small quadrupeds, eggs, wild fruits. etc. It is also a despoiler of poultry yards, and the inhabitants of the roost hold it in great fear.

HOME OF THE RED FOX AND THE SWIFT

Here are some interesting species of the Fox family.

RED FOX (*Canis fulvus*)

By some naturalists the Red Fox is regarded as only a variety of the common species. Its color is reddish brown ; its hair is long and thick, and the colder the climate, the longer and thicker its hair. Its tail is bushy. Its valuable fur makes it an object of the hunter's quest.

THE KIT FOX OR SWIFT FOX (*Canis velox*)

This is silver-gray in color, which make it easily distinguishable from the Red Foxes and others. It also has a broader head, smaller ears and shorter legs. It is common in the western states.

THE BADGER HOUSE

This contains a number of European Badgers (*Meles taxus*). These animals belong to the Skunk family. They are larger than the American Badger. They live on the ground and have great burrowing proclivities. Those at the Zoo will dig down to a distance of seven feet until they reach the cement bottom, then they will return to commence their work of digging over again. They are constantly at work, never idle, and are a splendid object lesson for anyone of worthless, indolent habits. Its skin is loose and thick, so that the teeth of other animals can make but little impression on it, while the Badger can actually turn itself around and take a bite at its assailant.

CAPE BUFFALO ENCLOSURE

This animal is found in South Africa. It frequents damp and marshy places, and because of its partiality for swamps is called the Water Buffalo. It is one of the most formidable animals of Africa and is feared equally with the lion. It has a morose, ill-tempered disposition. Wood says that the little eyes twinkle with sullen rays. It seems to be subject to a sudden impulse of rage, and it will then rush madly forward in blind fury, attacking its victim without any possibility of escape. It doesn't see well, however, and sometimes, in its blind rage, dashes through the forests and loses its eyesight entirely through contact with the thorny bushes. Wood mentions an instance when a whole company of Water Buffalos were rushing forward in one of these paroxysms of anger and a large one, who seemed to be the leader of the party, had the misfortune to drop upon his knees and was crushed to death by the hoofs of those following behind. The enclosure containing the Cape Buffalo (*Bubalus Caffer*) is located west of the Sea Lion Basin.

ALLIGATOR BASIN

The Alligators (*Alligator mississippiensis*) are found in the rivers and bayous of the Gulf States. Crocodiles are natives of Egypt and Southern Asia. Alligators are the largest of the reptilian order. They, by virtue of their immense size, muscular power, voracious appetite and formidable, sharp teeth, are absolute monarchs of the rivers in the countries which they inhabit. Human beings are even attacked and

carried off by these monster aquatic reptiles. It may be added that its movements on land are quite slow and sluggish. It crawls along by alternately moving each leg, in the manner of a quadruped when walking. The Allegator is very powerful, and in an attack or defense uses its large tail. It approaches its prey in the water by swimming silently toward it. It is very careful not to ruffle the water. It approaches its prey sidewise, the body and head being concealed, and, when certain of its aim, it strikes the object with its tail, full force, with the circle toward his jaws. As the tail makes the stroke the jaws are opened to their fullest extent to receive the object. There are several very fine specimens of the Alligator family in our collection.

LIZARDS

Lizards are found in all parts of the world. They are more common, however, in the warmer parts of the temperate zone. Among the most common species are the Brown Lizard, the Iguana, the Striped Lizard and the Lined. There are very fine



Photo by Enno Meyer.

ALLIGATORS

specimens of the African Lizards (*Cordylus polygamus*) in our collection. Most lizards are small, and also harmless. They feed on worms and insects. They have a long body and a round, tapering tail. Some have two pairs of limbs; others but one pair. Their bodies are covered with scales, their eyelids are immovable, and they have external ears. Some live on the ground, some on trees, some are aquatic and some are marine. Though bright-colored, they are repulsive looking because of their shape. In the collection of lizards at the Zoo are several odd-looking creatures, known as

THE IGUANA (*Iguana delicatissima*)

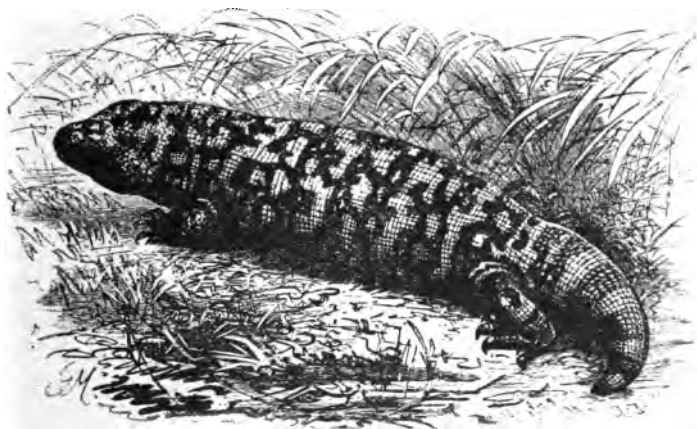
It is about three feet long. It inhabits South America. The skin is covered with small scales; its back is furnished with a row of prickles that stand up like the teeth of a saw. It is not venomous or dangerous, but its bite is painful. The flesh of the Iguana is considered good eating.

THE GILA MONSTER (*Heloderma suspectum*)

This is found in the desert regions of New Mexico and Arizona near streams. It was, for a long time, believed to be venomous. The present opinion, however, is that, while it may possess venomous powers, the animal is not inclined to exercise them.

TORTOISES AND TURTLES

These reptiles are characterized by having the skeleton on the outside of the body. They all have four limbs, and a kind of bony box encloses the body. Although they have no teeth, their jaws are sheathed in iron, enabling them to inflict a severe bite. Some live on the land, others in fresh water, and others are marine. The most familiar species is the common Land Tortoise. Among the collection at the Zoo is the Box Tortoise (*Terrapene carinata*), the Red-bellied Terrapin (*Pseudemys engosa*), the Mud Terrapin (*C. Pennsylvanicum*) and the Snapper Terrapin (*Chelydra serpentina*).



GILA MONSTER

THE PRAIRIE DOG VILLAGE

The visitor next turns to the right, where he will find his attention directed to the Prairie Dog Village, a large enclosure surrounded by a fence of iron and wire. The foundation of this fence is sunk seven feet in the ground in order to prevent the small rodents from burrowing out. This village is divided into two parts. The larger part contains the Prairie Dogs proper, while the smaller is given over to the Mink. The Prairie Dogs (*C. ludovicianus*) are very interesting little animals. They are found in abundance in the west between the Rocky Mountains and the Mississippi river. These animals live in large communities in some localities, and the ground is honey-combed for miles in extent with their burrows. They are called Prairie Dogs because their cry resembles the short, sharp bark of a small dog. The entrance to their burrow is at the summit of a little mound of earth. These mounds are sometimes not very conspicuous, but usually elevated somewhat above the common surface, rarely, however, more than a foot and a half in height. The holes descend vertically to the depth of two feet, whence they continue obliquely downward. They have a curious habit of sitting erect at the mouth of their burrow, and jumping hastily downward at the first alarm. The traveler coming upon a village of these rodents out west, if he approaches without creating alarm, will see scores, even hundreds, of these little fellows running about in their village, but at the first note of alarm from one of their number, a scene

of the wildest confusion ensues. Clouds of dust arise, caused by the hurrying and scurrying of the little, scampering animals who strike out at once for their respective burrows, down which they dive in the greatest haste. A moment later all is silent as a tomb, and but for the elevated burrows no one would know that a Prairie Dog was within a thousand miles of the place. Owing to the fact that the Rattlesnake and the Burrowing Owl are usually found in the Prairie Dog villages, the theory has been put forth that there is a strange and harmonious friendship existing among them. Eminent zoologists, however, scout at such an idea. They say that the Rattlesnake seeks the Prairie Dog village in order to feed on the baby Prairie Dogs, while the Burrowing Owl frequents it because he is too lazy to burrow for himself when he can find a Prairie Dog burrow in which to take up his home.

THE SEA LION BASIN

THE SEA LION (*Zalophus Californianus*)

This interesting department is located opposite the Prairie Dog Village. It is a large circular enclosure 60 feet in diameter. It is enclosed by a high substantial fence of iron. A rockery 25 feet in diameter is located in the center. Here are generally found several fine specimens. The Sea Lion is properly known by the name of Hair Seal. They are found in great numbers on the west coast of Africa and California southward. They breed in captivity and it is not uncommon to find baby Sea Lions in our collection. The Sea Lions we now have were captured at the Santa Barbara Islands, which are located across the channel from San Francisco. They were captured by Captain Mullet last spring. The mode of capturing these animals is simple, yet very exciting. It is very difficult to capture a large male Sea Lion. Parties desiring to capture Sea Lions go to Santa Barbara, where they engage men for this purpose who have had years of experience in capturing them. Four or five experts of this character usually approach the animals that are out on the rocks near the beach and select from a hundred or more the one which they desire to capture. The animals start for the water and when they arrive at a convenient place on the beach three lassoes are thrown simultaneously, one over the animal's neck, one over either of his front flappers and one over the rear flappers. The lasso over his rear flapper takes away the motive power of the animal. The ropes are held by some of the men while a large box which has already been made, without cover, is carefully stood on end behind the animal and then dropped over him as he lies stretched at full length on the sand. Small ropes



Meyer Photo.

FEEDING TIME—SEA LIONS

are worked under the animal and the box, and then lashed to the top of the box. At a given signal the ropes are loosened, the box turned over, and the animal held on his back in the cage until the cover is securely nailed down. The ropes are then loosened and the animal is free to move around in the box at will. The feeding time of the Sea Lions in the summer months is at 11 a. m. and 4 p. m., and in the winter months at 11 a. m. and 3 p. m. This is an interesting spectacle that all visitors will enjoy seeing. When they observe the approach of their keeper the Sea Lions become greatly excited. Their agility as they dart through the water, and their reckless plunges from the rockery to capture the fish thrown by their keeper, causes the water to splash in all directions, and it is not only amusing to see the animals capture their food, but also to see the spectators get out of the way of the water. The rockery is greatly enjoyed by the Sea Lions, who frequently climb upon it in bright days and there sun themselves for hours at a time.

THE RESTAURANT

This is a magnificent, beautiful and spacious building costing \$30,000.00, which is liberally patronized during the entire year, and especially during the summer amusement season, when every afternoon and evening finds its broad, cool verandas filled with visitors. All sorts of refreshments may always be found here.

THE CARP POND

Pursuing the walk around the lake, the visitor will come to the Carp Pond, which he crosses by means of a pretty, rustic bridge. Carp, as a rule, inhabit fresh water. They feed on worms, insects, aquatic plants and young fish. Some of the Carp in this pond weigh 20 pounds. As visitors are in the habit of feeding them, they are quite gentle and rise to the surface on the approach of visitors in anticipation of being fed.

ZEBU YARDS

Zebus are a curious sort of cattle found in India, China and the east coast of Africa. It is probable, however, that their original home is India, and that they were afterwards distributed to the other countries named. There are a number of different breeds, and they range in size from a large ox to a Newfoundland dog. They vary greatly in appearance. While the hump is a characteristic of all, in some of the cows it is so small as to be hardly perceptible. In some parts of India it also does duty as a horse, being either saddled or harnessed. Under such circumstances it may take journeys of considerable length. In the collection we have a pair of each size, the large and small varieties, the latter pair measure thirty-two inches from the ground to the shoulder. They weigh from one hundred and seventy-five to two hundred pounds.

THE RACCOON TREE

This is always very interesting to visitors. A high wire netting, arched with tin, surrounds it so that they cannot climb out. There are always a large number of raccoons here, and they are seen running around over the ground and climbing out on the branches of the tree. They are of quite a good-natured disposition, and it is quite interesting to watch their movements. A description of the Raccoon is given in another part of this book.

THE PICNIC GROUNDS

The Picnic Grounds are located in the northeastern part of the Gardens. They are supplied with tables and an abundance of swings and other conveniences. Here it is that thousands of happy picnickers enjoy their lunch during the outing season. The grounds are beautiful and shaded with forest trees.

THE FOUNDATION OF THE ZOO

East of the Raccoon Tree, across the walk, is the first cage owned by the Zoological Society. It was built by order of Mr. Andrew Erkenbrecher in 1868 for the Society of Acclimatization. Inasmuch as the Zoological Society originated from this Society, this cage may be regarded as the foundation of our beautiful Zoo. The cage is kept neatly painted, and is held in reverence by the stockholders. It always contains several varieties of birds.

THE PAVILLION OR WINTER QUARTERS

Directly east of the Club House, at the foot of the hill, is a handsome new pavilion, erected only a few years ago. It is a beautiful structure and contributes in no small measure to the pleasure of visitors in summer. The basement is used as winter quarters for the Elephant, Sea Lions, Ostriches, and some of the water fowls.



Photo by Enno Myer.

ZEBU, OR SACRED CATTLE

THE CRYSTAL SPRING

Continuing down the walk the visitor, who has no doubt by this time become thirsty, will find to the left, by following a path for a short distance, a running spring of cold, clear water, which is called the Crystal Spring.

VIRGINIA DEER ENCLOSURE

This enclosure contains a number of very fine specimens of Virginia Deer, (*Cervus Virginianus*). They are a variety of the Common Deer of the United States, which differ in size according to locality. They are smaller in the Southern States. The young of these deer are called fawns. They are easily domesticated, but the bucks are treacherous and apt to attack people.

THE EAGLE AVIARY

This is a very large and handsome building, divided into seven compartments and containing Eagles, Vultures, Hawks and Owls. All of these birds belong to the order Raptores or Birds of Prey. This order contains over 500 species, and they are widely distributed over the world. Their characteristics are strong bills, turned at the point, and large, strong feet supplied with powerful claws. Most of them are carnivorous, some capturing living prey, while others prefer carrion. To this latter class belong the Vultures, or Condor.

THE CONDOR (*Sarcoramphus aequatorialis*)

The Condor is an inhabitant of the great mountain system of South America. In dimensions it is the largest and most formidable of the Vulture family. The expanse of its wings will reach ten to eleven feet. When in full plumage, the male Condor may easily be distinguished from the female by its crest which extends over the top of the



Photo by Enno Meyer.

EAGLE AND VULTURE HOUSE

head and part of the beak. It was long supposed that the Vultures discovered their prey at a distance of several miles by sense of smell, but it is now generally admitted that they are guided chiefly by their keen eye sight. In walking, their gait is slow and heavy, and their body is maintained in a horizontal position. When about to fly, they are compelled to take several leaps before they can raise their weight from the ground. The collection includes the Pondicherry (Vulture calvus) and Black Vulture (*Catharista atrata*.)

BUZZARDS

They are generally very large and are heavy in their flight. The Eagles are closely allied with them. The collection in our Gardens include the Turkey Buzzard (*C. aura*) of North America, which is too familiar to be described, and the Caracara (*Polyborus tharus*), which are noted for their slender beaks and talons. Their prey consists mostly of reptiles and insects. They feed on offal and carrion, and in this resemble the Vultures. Their plumage is brown, marked with white.

HAWKS

The collection of Hawks includes the Red-tailed Hawk (*Buteo borealis*), the Red-shouldered Hawk, and the Sparrow Hawk (*Falcon sparverius*.)

OWLS

Large, soft, blinking eyes, surrounded by a peculiar disk of feathers which radiate, making a funnel-shaped depression, a small-hooked beak, just discernable among the downy plumage which surrounds it, and a round head, are characteristics of the members of the Owl family, which, by reason of their uniform look of wisdom, have been selected as symbols of wisdom itself. Almost without exception Owls are nocturnal, and their organs of vision are peculiarly adapted for such a life. They cannot endure the glare of daylight, their eyes being formed expressly for the dimmer twilight of evening or dawn. Light bewilders an Owl, causing it to blink uncomfortably and with as much apparent distress as a human being brought suddenly from a room of inky blackness into the broad glare of the noon-day. Among the Owls in our collection are

THE SNOWY OWL (*Nyctea niveo*)

Which is found in arctic and semi-arctic regions. It is a day-flying bird and a terrible foe to the small mammals as well as the small birds. It is also a good fisherman; it catches fish by skimming the surface of streams and snatching them as they rise after food.

THE SCREECH OWL (*Scops Asia*)

This is familiar to all farmers. It is about nine inches in length and has buff plumage streaked with black, white and gray. It feeds on rats and mice and is regarded as a friend by farmers.

EAGLES

There are usually from twelve to twenty eagles in the collection. Eagles are next in importance to the Vulture. They are of particular interest to the people of the United States because, by reason of their elevated and splendid flying, they were long ago selected as typifying American freedom.

THE GOLDEN EAGLE (*Aquila chrysaetus*)

This is the largest and most magnificent of these noble birds. It is found in almost all parts of the world. Its color is a rich, blackish brown; its head and neck are covered with golden red feathers. These give the bird its name. The female is generally the larger, sometimes measuring three feet six inches in length and nine feet in expanse of wings.

THE BALD OR WHITE-HEADED EAGLE (*Haliaetus leucocephalus*)

This bird is so called because of its white head and neck. Like the Golden Eagle, it lives constantly with its mate. Its general color is a deep, brownish black in the adult, though its head and neck are still white. Although it is regarded as the emblem of the United States, it is interesting to quote what Benjamin Franklin said: "For my part, I wish that the Bald Eagle had not been chosen as the representative of our country. He is a bird of bad moral character; he does not get his living honestly. Besides, he is a rank coward; the little King-bird, not bigger than a sparrow, attacks him boldly and drives him out of the district."

THE SMALL MAMMAL HOUSE

This house is located across the walk from the Eagle Aviary, and is divided into five compartments. In the first are American Wild Cats, (*Felis rufus*).



Photo by Enno Meyer.

AVARIES

These have a wide distribution, varying in color in the different parts of the country. They are usually found in the deeper portions of the forest, where they prey upon birds, squirrels and other small animals. The tail is hardly ever more than three inches in length. Their color is generally a deep red with small spots of blackish brown.

THE OPOSSUM (*Didelphys virginiana*)

Is a native of America. In form, habits and character it is peculiar — more so than any of the Marsupials. Their food consists of birds, birds' eggs and insects. Their home is generally in the hollow of a tree. The characteristic pouch of the order is well developed. When hard pressed they will feign death. The Opossum is nocturnal and very timid in its character.

THE RED FOX (*Canis fulvus*) AND THE GRAY FOX (*Canis virginianus*)

These have already been described.

WOODCHUCKS (*Arctomys monax*)

These, as has been indicated, are represented in the Small Mammal House.

THE OWL AVIARIES

Following the path westward, the visitor comes to the Owl Aviaries, where may always be found a large collection of Owls. One of the most interesting is

THE GREAT HORNED OWL (*Bubo virginianus*)

This is the largest Owl found in the United States. It is so called because of the tuft of feathers on each side of its head. It is also frequently called the Cat Owl, because the tufts are erected at will, and, when erected, gives it head a feline appearance. Its prey consists of young rabbits, squirrels, rats and mice, partridges and small birds. It frequently prowls around farm yards, and carries off chickens from the roost. This owl is rarely seen abroad by day; never unless disturbed.

THE CENTER LAKE

Turning to the right, the visitor will arrive at the shores of a large lake which contains a mammoth collection of Swans, Geese, Ducks, Pelicans, Cranes, Blue Herons, Gulls, Etc.

SWANS.

The Swan has a long neck. This is because it doesn't dive, yet subsists on aquatic roots, etc. The stroke of its wing is remarkable for its power. It is said that they live to be 100 years old. Owing to its beauty and grace, the Swan has been the inspiration of many a rhyme and story. There are four species of Swans. We have in our collection

THE TRUMPETER SWAN (*Cygnus buccinator*)

Which is found from the Mississippi river northward to the Hudson bay. Though a large bird, when migrating it can comfortably travel at the rate of 100 miles an hour, if the wind be in its favor.

THE WHISTLING SWAN (*Cygnus musicus*)

This is a native of Europe. The shape and the color of its beak, which is slender, without the black tubercle, and which is black at the tip and yellow at the base, distinguishes it from other species.

GEESE

Like all water fowl, geese are web-footed, and the legs are set far back, enabling them to better indulge their swimming propensities. This fact, however, makes it not

so easy for them to walk ; in fact, their movements on the ground are an unmistakable and unsteady waddle. It don't seem to possess much intelligence, and from this fact originates the expression, "You are a goose," as applied to some person who has done something foolish. Wild Geese, the Canadian Goose (*Barnicla canadensis*), the Chinese Goose (*Anser cygnoides*), and the Common Brant (*Bernicla brenta*) are among the collection.

DUCKS

These birds have short legs; the hind toe is separate, and a soft, sensitive skin covers the bill. They have thick plumage, and keep it well oiled, so they can dive without getting wet. The upper feathers are so close and thick on their back as to make them almost water-proof. The water runs off their backs without penetrating to the skin. Among the ducks found at the Lake are the Muscovy Duck (*C. moschata*) of North America, the Aylsbury Duck of Europe, and the Brown Call Duck (*Anas domesticus*) of Europe.



Photo by Enno Meyer

VIEW OF LAKE

PELICANS

In the Pelican all the toes are connected by a web. They are found both in the Old World and in the New World, in tropical and temperate regions. They have a large bill, from the lower part of which hangs a large pouch, capable of great extension, serving as a bag to stow away fish when not eaten when caught. It has very regular habits ; it starts out on a fishing excursion early in the morning, then flies to land, devours its capture, then sleeps, then goes out fishing again. In the evening, returning, it eats its prey and then goes to roost. This is the regular daily round of the Pelican. There are several varieties at the Zoo.

THE AMERICAN WHITE PELICAN (*P. thrachyrhynchus*)

Is the most familiar species in America. It is a very beautiful bird, and is rarely seen further east than Cape Hatteras. It is quite common on the Gulf Coast.

THE EUROPEAN PELICAN (*Pelecanus onocrotalus*)

Is found in many parts of Africa and Asia, as well as in Europe. It is characterized by an extremely large pouch, capable of holding a gallon or more of water.

HERONS

Like Storks and Ibises, are generally large, having long necks and tufts of feathers on both sides of the breast and posterior parts of the body. When they fly they double their necks and stretch back their legs. They feed on fish, reptiles, frogs, snails, slugs and insects. They are often seen standing in the water, watching for prey that may come within reach of their spear-shaped bills.

THE GREAT BLUE HERON (*Ardea herodias*)

This is a very familiar bird in the Eastern part of the United States. It is also common in South Africa. It has a sharp, conical-shaped bill, with which it pierces its prey. It varies greatly in plumage and measurements.

CRANES.

Cranes are found in warm countries. Their migrations are long. They have long, slender legs and plume-like feathers. Visitors to the Zoo are greatly amused by the grotesque caperings of these long-legged birds. The common Crane is about four feet in length. There are several species of these birds. The most notable in our collection are the Stanley Crane and the Sandhill Crane



The Cranes, Blue Herons and Pelicans are all taken to the Winter Quarters in winter, but the other birds remain here the entire winter. The ice is kept broken in places for their benefit, and sometimes, when the weather is extremely cold, the keeper throws some hay on the ice, and they stay on that.

THE BAND STAND

Directly in front of the Club House is the Music Stand, where the grand military band concerts are given during the summer. These concerts, particularly on the regular summer night fetes, are exceedingly entertaining, and their loss would be sadly felt in a city like Cincinnati, which contains so many lovers of music. On regular fete nights, the green sward beneath the trees is covered with thousands of comfortable, folding, opera chairs, and these are generally all taken, while the broad, clean, gravel walks are filled with gay and happy promenaders.

OUTINGS

In the outing season, the Zoological Gardens certainly do their share of the business. For outing purposes, no resort is more convenient or suitable than the Zoological Gardens. Containing 45 acres of wooded hill and dale, and being easy of access,

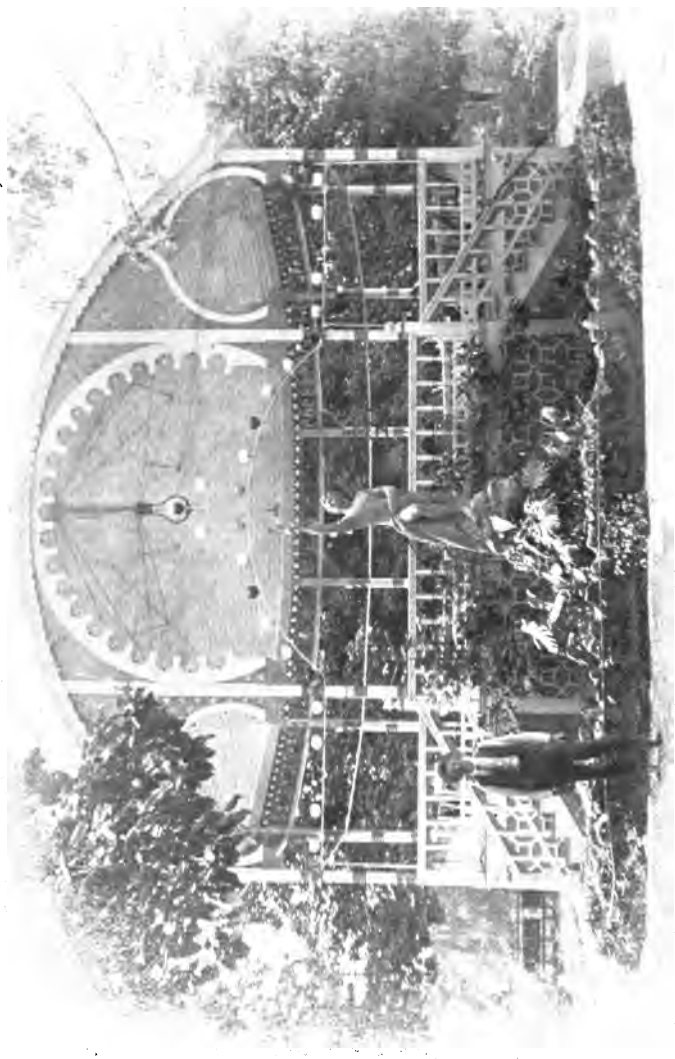


Photo by Enno Meyer.

BAND STAND

there is no reason in the world why every social, religious, political, industrial, commercial or other organization in Cincinnati should not hold its outings at the Zoological Garden. Indeed, it is their duty to do so, in order, in this way, to swell the receipts and aid in saving and maintaining this great institution for the educational and commercial interests of Cincinnati. This is doubly so since just as liberal terms for outings can be effected with the management of the Zoo as with the management of other resorts. Persons contemplating outings and picnics should not, by any means, arrange to go elsewhere until they have had a conference with the business manager of the Gardens.



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The Photos contained in this book were taken and perfected by Mr. Enno Meyer, a well known young artist and photographer of this city.

On account of new specimens being added to the collection from time to time it will be necessary at times to change an animal to another location in the Garden.

We do not allow flowers or shrubbery to be broken off or anything defaced.

Do not tease the animals.

Lost Children will be brought to the gate office where parents will find them.

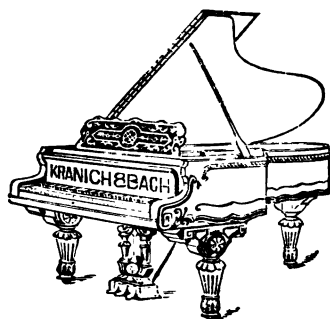
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